



CITY OF MANCHESTER.

REPORT

ON THE


Health of the City of Manchester

FOR

1947,

BY

C. METCALFE BROWN,
M.D., D.P.H., BARRISTER-AT-LAW,
Medical Officer of Health.



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HEALTH DEPARTMENT,
TOWN HALL,
MANCHESTER, 2,

6th August, 1948.

MY LORD MAYOR, ALDERMEN AND MEMBERS OF THE COUNCIL,

I have pleasure in presenting my report on the health of the City for the year 1947.

Tables covering the vital statistics for the City for 1947 are shown on pages 6 to 24. The figures are based on information supplied by the Registrar General and, as the estimates of the number and distribution of the non-civilian population and the non-civilian deaths are excluded, the estimated population is the civilian population only and the various rates are calculated on this basis.

The Registrar General's estimated population for the City in the middle of 1947 was 685,560, compared with 668,660 a year earlier. The natural increase in the population (*i.e.*, the excess of births over deaths) was 6,377 compared with 4,931 and 2,377 in 1946 and 1945 respectively.

The number of persons married during the year was 15,244, which is equal to a rate of 22·24 per 1,000 population. This is a slight reduction on the rate for 1946 which was 22·30, but is an increase on the annual average for the past 5 years which was 20·60.

Registered live births numbered 15,830 compared with 13,969 in the previous year, showing an increase of 1,861. Of this number 1,070, or 6·76 per cent., were illegitimate as compared with 1,095, or 7·84 per cent., in 1946. The birth rate for the year was 23·09, which is the highest rate recorded since 1921. The rate for England and Wales for 1947 was 20·5.

There were 427 stillbirths registered in 1947, which is equivalent to a rate of 26·27 per 1,000 total births. This rate is 4·60 lower than the one in 1946 and is the lowest stillbirth rate recorded in Manchester.

Total deaths from all causes number 9,453, giving a rate of 13·79 per 1,000 persons living. This rate is 4·7 per cent. below the average for the previous five years. The total consists of 4,934 males and 4,519 females, giving rates of 15·28 and 12·46 respectively per 1,000 of the population. The heaviest mortality was caused by the group including organic heart diseases and other diseases of the circulatory system which accounted for 2,548 deaths, a death rate of 3·72 per 1,000 persons living. Cancer (all forms) was responsible for 1,407 deaths, being a death rate of 2·05 per 1,000 living and causing 14·88 per cent. of the deaths from all causes. The group comprising pneumonia and broncho-pneumonia caused 452 deaths, a death rate of 0·66 per 1,000. Tuberculosis of the respiratory system was the cause of 450 deaths, giving a death rate of 0·66 per 1,000 living, as against 0·69 for 1946. Deaths from non-pulmonary tuberculosis numbered 64 or 0·09 per 1,000 of the population, the figures for 1946 being 67 and 0·10 respectively. The rates for 1947, both pulmonary and non-pulmonary tuberculosis are the lowest ever recorded in the City. The rates for England and Wales were pulmonary 0·47, and non-pulmonary tuberculosis 0·08.

The number of deaths of infants under one year old was 946 and the infant mortality rate 59·76 per 1,000 live births. Of this total 468, or 49 per cent., occurred in children in the first month of life. The main causes of death were malformation (including premature births), congenital debility, pneumonia, and diarrhoea.

The maternal mortality rate for 1947 was 1·54 per 1,000 total births compared with 1·60 for the previous year. The rate for England and Wales was 1·17. Of the total 25 maternal deaths in the City, 9, were due to puerperal and post-abortive sepsis.

During the year 15,096 cases of notifiable diseases (excluding tuberculosis) occurred in the City. Of this number 9,008 were cases of measles, which is the highest number notified since 1942. The number of deaths from this disease was 20. Comparable figures for 1946 were 3,800 and 3 respectively.

It is interesting to note that only 80 true cases of diphtheria were notified and of these 3 died. In both instances the figures are the lowest ever recorded in Manchester. The number of children who received a complete course of diphtheria prophylactic injections was 8,351, and 331 received their first injection. In addition, 603 children received re-inforcing course of diphtheria prophylactic. Supplementary to the usual facilities available for this work at Child Welfare Centres, Day Nurseries, School Clinics, etc., the Mobile Unit continued its daily visits to the various areas of the City where the percentage of immunised children was low and was responsible for the complete immunisation of 2,349 children. The estimated number of children under 15 years of age who have received a full course of immunisation is 101,766, which gives a percentage of 68·07 of all children in that age group in the City. The percentages in the age groups 0—5 years and 5—15 years are 56·05 and 75·56 respectively.

3 cases of typhoid fever and 1 case of paratyphoid fever were notified, none of which proved fatal.

There were 23 cases of cerebro-spinal fever notified and 8 deaths recorded from this disease, whilst in 1946 the cases numbered 33 and the deaths 10.

An epidemic of poliomyelitis commenced in June, 1947, and 123 cases were notified, 11 of which died. This is the subject of a special report on page 38

A slight increase in the incidence of whooping cough occurred during the year, 2,308 cases being notified as against 2,265 in 1946.

From the beginning of October, 1946, Manchester has been co-operating with the Medical Research Council to ascertain the value of a Whooping Cough Vaccine. Three trials have been commenced in Manchester, involving 2,400 children, aged between 6 and 18 months, who have been injected with the different kinds of vaccine. Following the inoculations, each child is visited monthly by a special investigator (trained nurse) who reports on the health of the child and particular attention is given to any child who is suffering from a cough or cold, or any symptom which may be one of early whooping cough. Nasal swabs are taken if necessary and these are examined by the bacteriologist at the Public Health Laboratory. Any child who definitely shows whooping cough symptoms is then visited by the Medical Officer in charge, who diagnoses the case as whooping cough or otherwise.

Suspected and true cases of whooping cough receive special attention, in that they are visited every few days to ascertain the severity of the illness and the prophylactic effect of the vaccine. Special attention is also paid to any inoculated child who comes into contact with a reported case of whooping cough. This contact is kept under special observation to ascertain whether the child remains immune or, if whooping cough is contracted, the severity of the attack.

In due course a report from the Medical Research Council, giving details of their findings will be submitted to the Health Committee.

The National Health Service Act, 1946, is undoubtedly a landmark in the history of public health legislation. Time may prove it to be the most important and far-reaching Act of Parliament, as regards health measures, passed since the first Public Health Act of 1848 was placed on the Statute Book.

Opportunity is taken here to give thanks especially to those members of the staff who have now passed from the service of the City Council to the Regional Hospital Board for their loyal service during the past years.

I again wish to express my grateful thanks to the Chairman and members of the Health Committee and to the officers of the Health and other Departments who have done so much during the year in our common endeavour to be of service to the City.

I have the honour to be,

My Lord Mayor, Ladies, and Gentlemen,

Your obedient servant,

CHARLES METCALFE BROWN,

Medical Officer of Health.

HEALTH COMMITTEE

1947-48.

CHAIRMAN—Councillor T. M. Larrad, J.P.

DEPUTY CHAIRMAN—Councillor Mrs. Eveline Hill, J.P.

THE LORD MAYOR—Alderman Miss M. L. Kingsmill Jones, O.B.E., M.A., J.P.

Alderman R. G. Edwards, M.A., J.P.

,, F. Farrington

,, Mary A. Gibbons

,, Alfred James, J.P.

,, T. Walker

Councillor Hannah Baldwin, J.P.

,, James Bowes

,, J. E. Burgess

,, W. Chadwick, M.B., CH.B.

,, Elizabeth Cruse

,, Charles Gordon, M.A., M.D.

Councillor J. H. Kearns

,, Mary Knight

,, A. Littlemore

,, J. McGrath

,, W. Onions, J.P.

,, H. A. E. Ramsden

,, W. Somerville, J.P.

,, R. E. Thomas

,, F. E. Tylecote, M.D.,
F.R.C.P., J.P.

,, Mabel S. Whittaker, J.P.

HEALTH OFFICERS.

(A) Medical.

C. Metcalfe Brown, M.D., D.P.H., Barrister-at-Law	Medical Officer of Health.
A. M. M. Grierson, O.B.E., M.D., D.P.H., F.R.S.E.	Deputy Medical Officer of Health.
D. P. Sutherland, M.B., B.S. (LOND.)..	Senior Tuberculosis Officer and Deputy Administrative Tuberculosis Officer.
Andrew B. Semple, M.D., D.P.H.... ..	Senior Assistant Medical Officer of Health.
Margaret H. Mackillop, M.B., CH.B. ..	Assistant Medical Officer of Health (Maternity and Child Welfare).
James F. Swan, M.D., D.P.H., D.R.C.O.G. (Resigned 14.11.47)	Assistant Medical Officer of Health.
Andrew V. Magee, M.B., CH.B.	Assistant Medical Officer of Health (Whooping Cough Investigation— part-time).
Thomas M. Edward, M.B., CH.B. ..	Diphtheria Immunisation Officer— part-time.

(B) Other Professional.

Harri Heap, M.SC., F.R.I.C.	Public Analyst.
Frederick Dixon, B.SC., F.R.I.C.	Assistant Public Analyst.
J. Lawson, M.R.San.I.	Chief Sanitary Inspector.
Winifred M. L. Selmes, S.R.N., S.C.M., D.N. (LOND. UNIV.).. .. .	Nursing Organiser.

(C) Lay.

George Ogden, F.C.C.S.	Lay Administrative Officer.
George Plant	Deputy Lay Administrative Officer.

Senior Administrative Assistants.

Harold I. Bayford	General Administration.
Walter Hart	Infectious Diseases and Statistical.
Charles W. Wilkinson	Hospitals Administration.

Vaccination Officers	4
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General Administration, Infectious Diseases and Hospitals Admin- istration	31 Clerks and Typists,
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GENERAL STATISTICS

The following are general statistics for the year 1947 :—

Area of the City in Acres	27,255												
Census population for the year 1931	<table><tr><td>Males</td><td>..</td><td>360,976</td></tr><tr><td>Females</td><td></td><td>405,402</td></tr></table>	Males	..	360,976	Females		405,402 766,378						
Males	..	360,976												
Females		405,402												
Estimated population for the year 1947 (Registrar General)	<table><tr><td>Males</td><td>..</td><td>322,907</td></tr><tr><td>Females</td><td></td><td>362,653</td></tr></table>	Males	..	322,907	Females		362,653 685,560						
Males	..	322,907												
Females		362,653												
Rateable value (1st April, 1947)	£6,442,711												
Sum represented by a penny rate (estimated)	£24,950												
No. of persons per acre	25												
Persons married per 1,000 of population	22.24												
Live Births	<table><tr><td></td><td>Total</td><td>Males</td><td>Females</td></tr><tr><td>{ Legitimate ..</td><td>14,760</td><td>7,509</td><td>7,251 }</td></tr><tr><td>{ Illegitimate ..</td><td>1,070</td><td>558</td><td>512 }</td></tr></table>		Total	Males	Females	{ Legitimate ..	14,760	7,509	7,251 }	{ Illegitimate ..	1,070	558	512 } 15,830
	Total	Males	Females											
{ Legitimate ..	14,760	7,509	7,251 }											
{ Illegitimate ..	1,070	558	512 }											
Live-birth rate per 1,000 of population	23.09												
Still-births	<table><tr><td>{ Males ..</td><td>221</td></tr><tr><td>{ Females ..</td><td>206 }</td></tr></table>	{ Males ..	221	{ Females ..	206 } 427								
{ Males ..	221													
{ Females ..	206 }													
Still-births rate per 1,000 total (live and still) births	26.27												
Deaths	<table><tr><td>{ Males ..</td><td>4,934</td></tr><tr><td>{ Females ..</td><td>4,519 }</td></tr></table>	{ Males ..	4,934	{ Females ..	4,519 } 9,453								
{ Males ..	4,934													
{ Females ..	4,519 }													
Death rate per 1,000 of the estimated resident population	<table><tr><td>{ Males ..</td><td>15.28</td></tr><tr><td>{ Females ..</td><td>12.46 }</td></tr></table>	{ Males ..	15.28	{ Females ..	12.46 } 13.79								
{ Males ..	15.28													
{ Females ..	12.46 }													
Excess of registered births over deaths	6,377												
Percentage of mortality occurring in public institutions	46.73												

Deaths from puerperal causes:—

	Deaths	Rate per 1,000 total (live and still) births	
Puerperal and post-abortive sepsis	9	0.55	} .. 1.54
Other puerperal causes	16	0.99	
Total	25		

Death Rate of Infants under one year of age:—

All infants per 1,000 live births	.. .. . 59.76
Legitimate infants per 1,000 legitimate live births	.. .. . 58.20
Illegitimate infants per 1,000 illegitimate live births	.. .. . 81.31

No. of Occupied Structurally Separate Dwellings at the Census in April, 1931	.. 177,430
No. of Inhabited Houses according to Rate Books	.. .. . 197,532
No. of persons per occupied Structurally Separate Dwelling (Census 1931)	.. 4.32
No. of persons per house, 1947 (based on 199,388 houses connected with the water supply within the City)	.. .. . 3.44
No. of new houses erected during 1947:—	
By Local Authority (Houses 432, Flats 86, Temporary Bungalows 1,803)	2,321
By other bodies or persons	146
	2,467

The City of Manchester, with a population of 685,560 and an area of 27,255 acres, is the centre of one of the most densely populated industrial areas in Britain. It is an inland port with modern equipment dealing with more than three million tons of shipping per annum and is a main centre for distribution by road, rail, and sea.

A great industrial centre, Manchester is known throughout the world for its cotton industry, its heavy engineering and chemical industries.

Manchester being situated at the junction of three valleys leading from the Pennines and containing the rivers Irwell, Irk and Medlock, has a surface level varying from about 80 feet above sea level to the south, and 300 feet to the north. The solid geology is for the most part obscured by thick deposits of glacial drift (boulder-clay, sands, and gravels), which so generally over-spread the neighbourhood. The underlying strata are triassic, permian, and carboniferous rocks, dipping westwards from the Pennine Chain to the plains of Cheshire.

Manchester is within easy reach of the breezy hills and high moorlands of the Pennine Chain on its eastern and northern sides, and the Derbyshire hills on the south-eastern side, which are plainly visible from the outskirts of the City.

METEOROLOGY, 1947.

Means of the Monthly Readings from Whitworth Observatory, Manchester.

	Wet Bulb	Dry Bulb	Mean Maximum Temperature	Mean Minimum Temperature	Mean Temperature	Total Rainfall (inches)	Total Number of Wet Days	Total Hours of Sunshine	Number of Days on which Fog was noted at 09.00 G.M.T.
January	35.9	37.0	41.6	33.0	37.6	2.31	15	31.00	1
February	28.4	30.0	33.6	27.1	30.4	0.41	6	14.84	2
March	36.9	38.4	44.5	33.8	39.2	4.99	24	49.29	1
April	43.8	47.5	54.7	41.3	48.0	2.37	17	118.50	0
May	52.7	57.6	66.7	48.8	57.8	2.15	13	155.93	0
June	55.8	60.6	68.5	53.4	61.0	1.89	15	138.30	0
July	58.3	62.2	68.7	56.6	62.7	2.85	16	104.16	0
August	60.6	67.0	77.5	57.5	67.5	0.37	3	246.76	0
September	54.7	58.4	66.7	51.7	59.3	2.11	15	92.70	2
October	49.1	50.9	59.4	46.5	53.0	0.53	11	76.26	5
November	42.5	44.3	49.9	39.4	44.7	3.76	21	43.50	3
December	42.5	44.3	44.5	39.4	42.0	2.75	17	7.44	5
YEAR ..	46.8	49.8	56.4	44.0	50.3	26.49	173	1078.68	19
Means						Totals			

The Meteorological Station situated at the Corporation Cleansing Yard, 299, Oldham Road, which had been in operation since 1892, was dismantled in June, 1938. This was necessary on account of further accommodation being required for building purposes of the Cleansing Committee. After communication with the Air Ministry they considered that the records taken at the Meteorological Station connected with the Manchester University in Whitworth Park were sufficient for their purpose.

Birth Rate, Death Rate, and Analysis of Mortality, 1947, in England and Wales, Grouped Areas, London and Manchester.

	BIRTH RATE PER 1,000 TOTAL POPULATION		ANNUAL DEATH RATE PER 1,000 POPULATION								RATE PER 1,000 LIVE BIRTHS	
	Live Births	Still Births	All Causes	Typhoid and Paratyphoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Diarrhoea and Enteritis (under two years)	Total Deaths (under one year)
England and Wales	20.5	0.50	12.0	0.00	0.00	0.01	0.00	0.02	0.01	0.09	5.8	41
126 County Boroughs and Great Towns, including London..	23.3	0.62	13.0	0.00	0.00	0.02	0.00	0.03	0.01	0.09	8.0	47
148 Smaller Towns, estimated Resident Population 25,000 to 50,000 at Census	22.2	0.54	11.9	0.00	0.00	0.02	0.00	0.02	0.01	0.08	3.7	36
London Administrative County	22.7	0.49	12.8	0.00	—	0.01	0.00	0.02	0.01	0.08	4.8	37
Manchester	23.1	0.62	13.8	—	—	0.03	—	0.03	0.00	0.05	14.1	60

A dash (—) signifies that there were no deaths.

CAUSES OF DEATH, 1947

Registrar General's Return.

Manchester.

CAUSES OF DEATH	AGES AT DEATH								
	Male	Female	At All Ages	Under 1 Year	1 Year and Under 5 Years	5 Years and Under 15 Years	15 Years and Under 45 Years	45 Years and Under 65 Years	65 Years and Over
Typhoid and Paratyphoid Fevers..	—	—	—	—	—	—	—	—	—
Cerebro-Spinal Fever	4	4	8	2	1	2	1	—	2
Scarlet Fever	—	—	—	—	—	—	—	—	—
Whooping Cough	7	11	18	11	7	—	—	—	—
Diphtheria.. .. .	—	3	3	—	—	3	—	—	—
Tuberculosis of Respiratory System	283	167	450	4	5	1	236	176	28
Other forms of Tuberculosis	36	24	64	6	14	9	25	6	4
Syphilitic Diseases	29	8	37	3	—	—	4	19	11
Influenza	22	14	36	3	3	2	4	10	14
Measles	13	7	20	11	8	1	—	—	—
Acute Poliomyelitis and Polioen- cephalitis	5	6	11	—	3	1	7	—	—
Acute Infectious Encephalitis ..	3	8	11	1	—	—	4	4	2
Cancer of Buccal Cavity and Oesophagus (M.), Uterus (F.) ..	76	83	159	—	—	—	10	72	77
Cancer of Stomach and Duodenum	141	111	252	—	—	—	13	110	129
Cancer of Breast	1	128	129	—	—	—	15	62	52
Cancer of All other Sites.. .. .	502	365	867	—	2	—	64	383	418
Diabetes	17	36	53	—	—	—	2	14	37
Intra-Cranial Vascular Lesions ..	375	582	957	3	—	1	19	245	689
Heart Disease	1093	1053	2146	—	—	3	105	526	1512
Other Diseases of Circulatory System	222	180	402	1	—	—	13	78	310
Bronchitis	559	321	880	16	9	2	36	286	531
Pneumonia	267	185	452	154	18	1	22	97	160
Other Respiratory Diseases	67	47	114	7	2	1	17	37	50
Ulcer of Stomach and Duodenum..	68	23	91	1	—	—	11	52	27
Diarrhoea (under 2 years)	126	103	229	223	6	—	—	—	—
Appendicitis	10	12	22	—	1	2	8	7	4
Other Digestive Diseases	91	95	186	10	6	4	17	49	100
Nephritis	99	125	224	4	3	2	35	70	110
Puerperal and Post-Abortive Sepsis	—	9	9	—	—	—	9	—	—
Other Maternal Causes	—	16	16	—	—	—	16	—	—
Premature Birth	103	78	181	181	—	—	—	—	—
Congenital Malformations, Birth Injuries, and Infantile Diseases	135	121	256	233	6	5	7	4	1
Suicide	43	24	67	—	—	—	20	30	17
Road Traffic Accidents	56	25	81	—	3	8	23	18	29
Other Violent Causes	88	58	146	29	13	10	29	29	36
All other Causes	393	483	876	43	9	9	83	116	616
Totals.. ..	4934	4519	9453	946	119	67	855	2500	4966

A table showing the mortality rates due to various causes, etc., from 1911 onwards appears at the end of the report.

CITY OF MANCHESTER

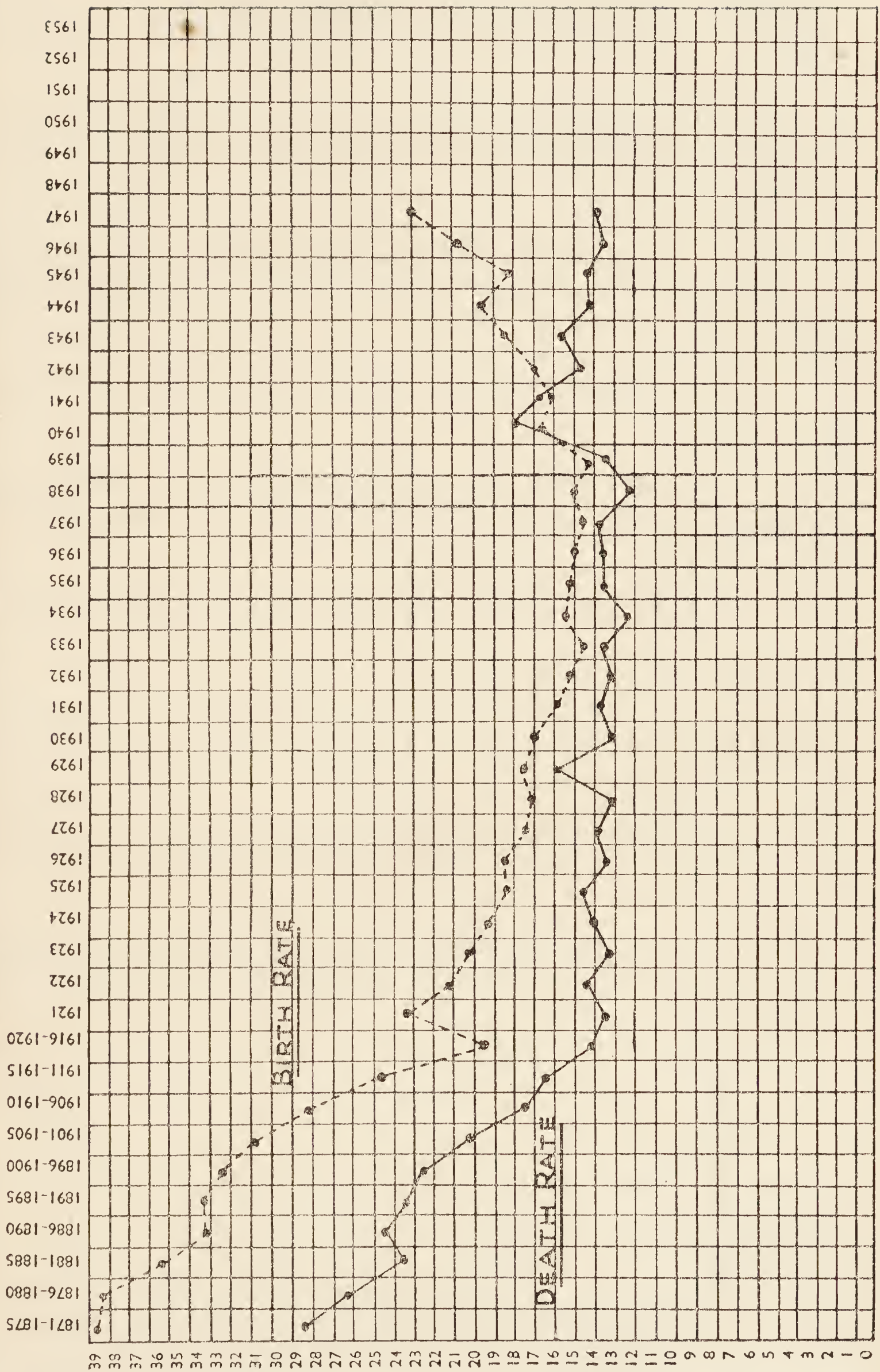
PROPORTIONS OF DEATHS FROM PRINCIPAL CAUSES

TO TOTAL DEATHS — 1944



THE TOTAL DEATH RATE FROM ALL CAUSES WAS 13.79.

CITY OF MANCHESTER
BIRTH & DEATH RATES PER 1000 OF THE POPULATION



Manchester, 1947—Ward Population, Area, Density, Births and Deaths, with Birth, Death, and Infant Mortality Rates.

(Figures compiled by Medical Officer of Health for 52 Weeks.)

12

WARDS	Estimated populations	Area in acres	Persons per acre	Births (Live)		Deaths		Natural rate of Increase	Deaths under 1 year per 1,000 births
				Total	Rate per 1,000 pop.	Total	Rate per 1,000 pop.		
CITY OF MANCHESTER..	685560	27255	25.15	15830	23.09	9457	13.79	+ 9.30	60.20
All Saints'	12832	300	42.77	366	28.52	242	18.86	+ 9.66	117.49
Ardwick ..	17896	426	42.01	513	28.67	263	14.70	+ 13.97	81.87
Beswick ..	21436	254	84.39	522	24.35	318	14.83	+ 9.52	63.22
Blackley ..	28032	1158	24.21	725	25.86	353	12.59	+ 13.27	35.86
Bradford ..	25332	790	32.07	645	25.46	309	12.20	+ 13.26	46.51
Cheetham..	22026	555	39.69	462	20.98	282	12.80	+ 8.18	54.11
Chorlton-cum-Hardy	41571	1666	24.95	725	17.44	547	13.16	+ 4.28	40.00
Collegiate Church ..	8121	446	18.21	225	27.71	162	19.95	+ 7.76	71.11
Collyhurst..	12283	232	52.94	393	32.00	179	14.57	+ 17.43	58.52
Crumpsall..	24250	2203	11.01	511	21.07	297	12.25	+ 8.82	41.10
Didsbury ..	30868	2354	13.11	476	15.42	395	12.80	+ 2.62	65.13
Exchange...	82	61	1.34	2	24.39	2	24.39	—	—
Gorton North ..	21767	604	36.04	399	18.33	282	12.96	+ 5.37	55.14
Gorton South ..	26229	628	41.77	529	20.17	331	12.62	+ 7.55	49.15
Harpurhey ..	18394	344	53.47	538	29.25	242	13.16	+ 16.09	48.33
Levenshulme ..	19557	606	32.34	322	16.43	273	13.93	+ 2.50	59.01
Longsight ..	25439	593	42.90	465	18.28	346	13.60	+ 4.68	53.76
Medlock Street..	15351	212	72.41	434	28.27	234	15.24	+ 13.03	82.95
Miles Platting ..	14535	313	46.44	493	33.92	205	14.10	+ 19.82	50.71
Moston ..	29118	1231	23.65	604	20.74	322	11.06	+ 9.68	24.83
Moss Side East ..	16608	241	68.91	477	28.72	268	16.14	+ 12.58	75.47
Moss Side West ..	19222	267	71.99	478	24.87	301	15.66	+ 9.21	48.12
New Cross ..	12640	303	41.72	354	28.01	252	19.94	+ 8.07	53.67
Newton Heath ..	20753	1005	20.65	537	25.88	329	15.85	+ 10.03	52.14
Openshaw ..	18398	482	38.17	464	25.22	251	13.64	+ 11.58	58.19
Oxford ..	192	167	1.15	7	36.46	22	114.58	78.12	—
Rusholme ..	20056	806	24.88	367	18.30	288	14.36	+ 3.94	73.57
St. Ann's...	17	55	0.31	1	58.82	1	58.82	—	—
St. Clement's ..	753	181	4.16	17	22.58	12	15.94	+ 6.64	—
St. George's ..	16097	266	60.52	513	31.87	253	15.72	+ 16.15	85.77
St. John's ..	1529	199	7.68	41	26.81	48	31.39	— 4.58	243.90
St. Luke's ..	20044	316	63.43	559	27.89	418	20.85	+ 7.04	100.18
St. Mark's ..	19317	340	56.81	550	28.47	278	14.39	+ 14.08	69.09
St. Michael's ..	11496	243	47.31	380	33.05	204	17.75	+ 15.30	73.68
Withington ..	49050	1841	26.64	837	17.06	536	10.93	+ 6.13	59.74
Wythenshawe ..	44229	5567	7.94	899	20.33	412	9.32	+ 11.01	60.07

Specified Causes, and (c) infant mortality; also the percentages to total Deaths of Inquest Cases and of Deaths in Public Institutions; also Quinquennial Averages, 1871—1947.

Year	Estimated Population (Mean)	Marriage Rate per 1,000 persons living	Annual Rates per 1,000 persons living										Percentage to Total Deaths		Infant Mortality	Year		
			Births	Deaths (all causes)	Smallpox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	Typhus Fever	Typhoid and Paratyphoid Fever	Simple Continued Fever	Diarrhoea	Violence			Inquest Cases	Deaths in Public Institutions
1871-1875	477,344	24.6	38.9	28.3	0.26	0.64	1.08	0.08	0.78	0.14	0.43	0.21	1.95	0.94	7.2	13.4	198	.. 1871-1875
1876-1880	509,802	18.6	38.7	26.2	0.24	0.53	1.07	0.13	0.84	0.08	0.29	0.11	1.26	0.89	7.5	14.3	172	.. 1876-1880
1881-1885	542,746	17.9	35.1	23.6	0.04	0.71	0.48	0.10	0.68	0.05	0.20	0.03	0.99	0.72	7.0	15.9	175	.. 1881-1885
1886-1890	575,630	16.6	33.4	24.6	0.02	0.83	0.50	0.32	0.54	0.02	0.30	0.01	1.08	0.78	6.9	17.7	183	.. 1886-1890
1891-1895	517,801	16.9	33.2	23.6	0.03	0.62	0.26	0.27	0.64	0.00	0.24	0.01	1.19	0.77	7.1	19.2	186	.. 1891-1895
1896-1900	539,599	18.2	32.5	22.7	..	0.89	0.20	0.13	0.53	0.00	0.18	0.01	1.69	0.73	7.1	20.2	192	.. 1896-1900
1901-1905	554,355	17.4	30.9	20.1	0.01	0.55	0.19	0.22	0.41	0.00	0.13	0.00	1.15	0.72	7.1	24.4	173	.. 1901-1905
1906-1910	660,049	17.0	28.1	17.7	..	0.54	0.16	0.17	0.37	0.00	0.10	0.00	0.76	0.68	7.4	27.3	147	.. 1906-1910
1911-1915	720,565	17.9	25.3	16.5	..	0.51	0.12	0.14	0.26	..	0.06	..	0.83	0.66	7.4	29.2	133	.. 1911-1915
1916-1920	B 746,909 D 699,325	18.4	19.9	15.7	..	0.28	0.04	0.08	0.24	..	0.02	0.00	0.33	0.55	6.3	29.7	105	.. 1916-1920
1921-1925	751,080	16.8	20.6	13.9	..	0.25	0.07	0.10	0.21	..	0.01	..	0.31	0.45	5.7	37.4	96	.. 1921-1925
1926-1930	752,840	16.6	17.5	13.9	..	0.18	0.02	0.11	0.14	..	0.01	..	0.29	0.50	4.8	42.8	88	.. 1926-1930
1931-1935	759,180	17.1	15.3	13.4	..	0.11	0.02	0.10	0.08	..	0.00	..	0.15	0.54	4.8	48.3	77	.. 1931-1935
1936-1940	712,660	21.4	15.2	14.3	..	0.07	0.00	0.09	0.04	..	0.00	..	0.10	0.70	4.9	52.0	71	.. 1936-1940
1941-1945	608,256	20.9	18.1	15.0	..	0.02	0.00	0.04	0.06	..	0.00	..	0.15	0.68	5.1	50.7	64	.. 1941-1945
1943	599,300	17.3	18.7	15.5	..	0.02	0.00	0.05	0.07	..	0.00	..	0.15	0.59	5.1	53.6	61	.. 1943
1944	614,760	18.0	19.9	14.2	..	0.02	..	0.01	0.04	..	0.00	..	0.12	0.57	4.9	49.5	54	.. 1944
1945	623,480	23.8	18.2	14.4	..	0.01	..	0.02	0.04	..	0.00	..	0.14	0.50	4.2	46.5	56	.. 1945
1946	668,660	22.3	20.9	13.5	..	0.00	..	0.02	0.05	..	0.00	..	0.25	0.44	3.9	46.1	64	.. 1946
1947	685,560	22.2	23.1	13.8	..	0.03	..	0.00	0.03	..	..	..	0.33	0.42	3.6	46.7	60	.. 1947

The populations and rates prior to 1891 are those for the Unions of Manchester, Chorlton, and Prestwich, which have been taken as approximately representing "Manchester." The City was extended to include Moss Side and Withington in November, 1904, Gorton and Levenshulme in November, 1909, and Wythenshawe April, 1931.

From 1911 population and rates based on Registrar-General's returns.

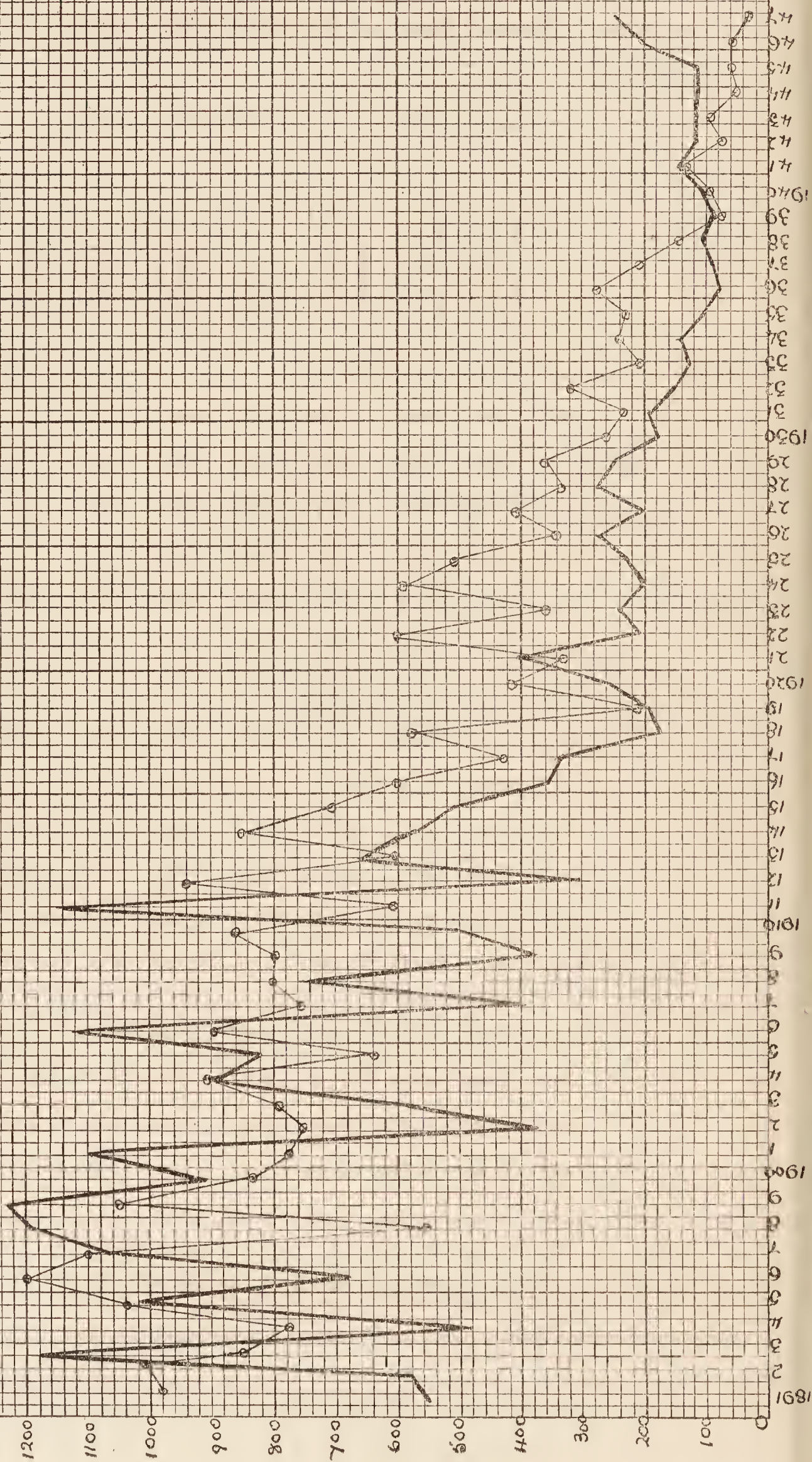
(B)—Population for calculating birth-rates

CITY OF MANCHESTER

DEATHS FROM VARIOUS DISEASES [ALL AGES]

DIPHTHERIA AND ENTERITIS

WHOPPING COUGH, DIPHTHERIA AND SCARLET FEVER



Manchester—Annual Rates of Mortality from certain causes of Death.

YEAR		ANNUAL RATES PER 1,000 PERSONS LIVING									RATES PER 1,000 BIRTHS*	
		Cancer	Tuberculosis of Respiratory System	Other Forms of Tuberculosis	Diseases of Nervous System	Diseases of Heart	Diseases of Respiratory System	Diseases of Digestive System	Nephritis	Diseases of Generative System	Puerperal and Post Abortive Sepsis	Other Puerperal Causes
1881-1885	..	0.50	2.42	0.92	3.28	1.37	5.41	1.23	..	0.08	3.03	1.99
1886-1890	..	0.64	2.24	0.95	3.09	1.73	5.76	1.23	..	0.08	3.22	2.13
1891-1895	..	0.62	2.09	0.97	1.74	2.53	5.56	1.07	..	0.07	2.75	3.42
1896-1900	..	0.73	2.04	0.82	1.32	2.54	5.03	1.04	..	0.09	1.55	1.51
1901-1905	..	0.80	1.91	0.71	1.17	1.74	4.24	1.87	0.41	0.08	1.21	1.76
1906-1910	..	0.88	1.66	0.59	0.95	1.72	3.77	1.42	0.44	0.07	1.28	1.49
1911-1915	..	1.04	1.67	0.47	0.79	1.24	3.62	1.44	0.46	0.09	1.42	2.56
1916-1920	..	1.21	1.61	0.41	0.54	1.21	3.41	0.84	0.41	0.06	1.70	2.14
1921-1925	..	1.36	1.27	0.30	0.51	1.39	3.11	0.74	0.34	0.07	1.83	2.10
1926-1930	..	1.50	1.19	0.21	0.48	1.81	2.65	0.75	0.36	0.07	2.14	2.63
1931-1935	..	1.67	1.02	0.16	0.41	2.50	1.97	0.55	0.37	0.05	* 1.59	* 2.20
1936-1940	..	1.81	0.93	0.14	0.38	3.10	2.07	0.53	0.37	0.06	1.11	2.40
1941-1945	..	2.10	0.93	0.14	† 1.62	3.10	2.39	0.65	0.37	0.03	0.71	1.30
1943 .. ..	..	2.14	0.91	0.16	1.53	3.06	2.64	0.71	0.37	0.01	1.04	1.29
1944 .. ..	..	2.09	0.80	0.11	1.58	3.17	2.04	0.58	0.37	0.01	0.64	1.19
1945 .. ..	..	2.08	0.80	0.13	1.60	2.93	2.33	0.61	0.34	0.03	0.25	0.77
1946 .. ..	..	1.92	0.69	0.10	1.43	2.81	2.11	0.68	0.32	0.00	0.35	1.25
1947 .. ..	..	2.05	0.66	0.09	1.59	3.13	2.11	0.77	0.33	0.07	0.55	0.99

* Maternal Mortality rates until 1930 were based on per 1,000 Live Births. From 1931 onwards these rates were calculated on per 1,000 Live and Stillbirths.

† Diseases of Nervous System includes Cerebral Hæmorrhage from 1941. From 1911 rates are based on Registrar General's Returns.

MATERNAL MORTALITY

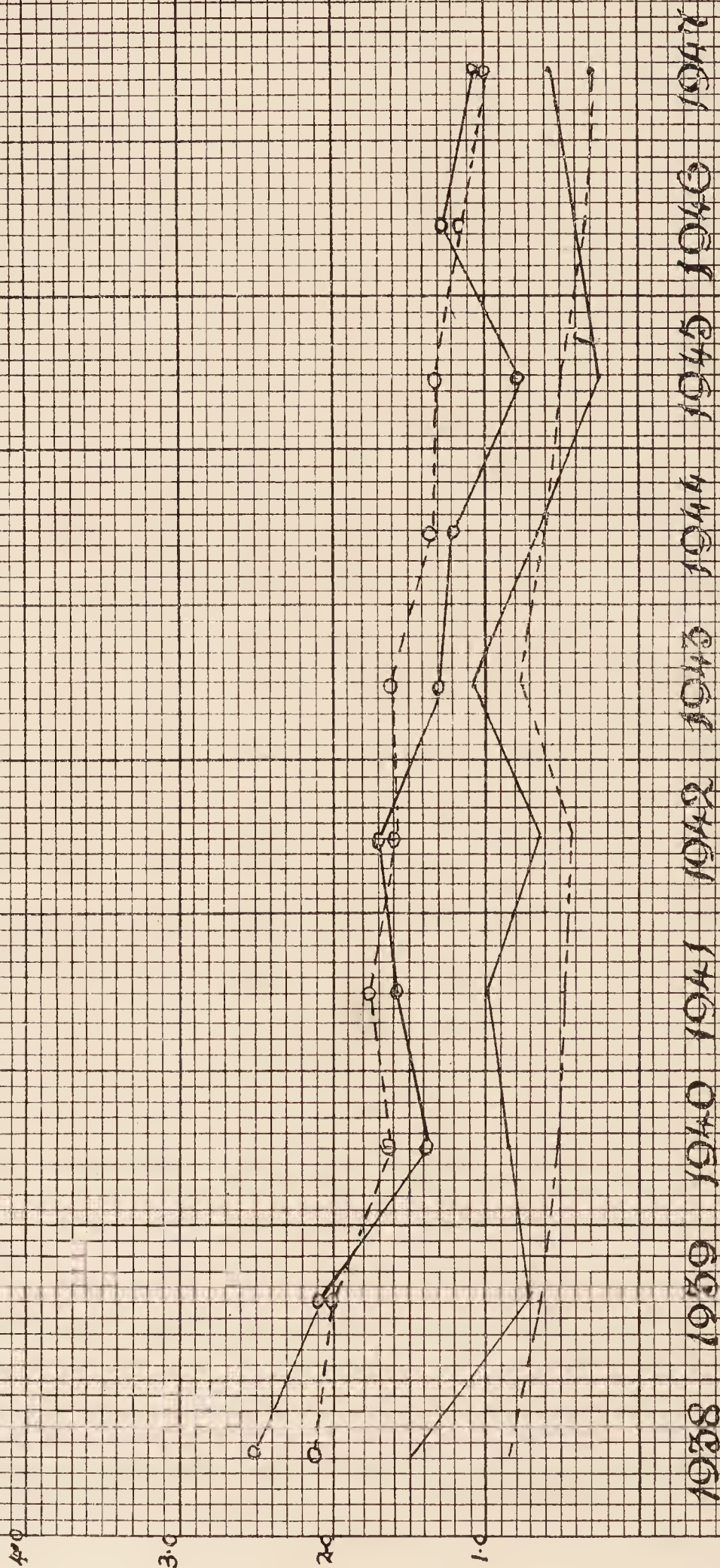
MORTALITY PER 1000 LIVE AND STILLBIRTHS

ENGLAND AND WALES

----- Puerperal and Post Abortive Sepsis
 - - - - - Other Causes

MANCHESTER

----- Puerperal and Post Abortive Sepsis
 - - - - - Other Causes



Manchester, 1947—Deaths in Wards for Various Diseases and Death Rates per 1,000 of the Population.
(Figures Compiled by Medical Officer of Health for 52 Weeks.)

WARDS	ESTIMATED POPULATION	WHOOPING COUGH		DIPHTHERIA		MEASLES		TUBERCULOSIS ALL FORMS		SYPHILITIC DISEASES		DISEASES OF HEART AND CIRCULATORY SYSTEM		CANCER ALL SITES		PNEUMONIA		BRONCHITIS		DIGESTIVE SYSTEM		URINARY SYSTEM		ALL CAUSES	
		Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
CITY OF MANCHESTER..	685560	19	·03	4	·01	20	·03	510	·74	41	·06	2517	3·67	1390	2·03	149	·66	876	1·28	536	·78	343	·50	9157	13·75
All Saints'	12832	1	·08	—	—	—	—	21	1·61	—	—	61	4·75	25	1·95	12	·93	25	1·95	17	1·32	8	·62	242	18·86
Ardwick	17896	—	—	—	—	2	·11	27	1·51	1	·06	58	3·24	32	1·79	16	·89	19	1·06	22	1·23	14	·61	263	14·70
Beswick	21436	2	·09	—	—	—	—	22	1·03	1	·05	73	3·40	58	2·71	13	·61	35	1·63	20	·93	12	·56	318	14·83
Blackley	28032	1	·04	—	—	2	·07	16	·57	1	·04	102	3·64	53	1·89	13	·46	38	1·36	15	·53	17	·61	353	12·59
Bradford	25332	—	—	—	—	2	·08	14	·55	2	·08	68	2·68	43	1·70	18	·71	40	1·58	11	·55	10	·39	309	12·20
Cheetham	22026	—	—	—	—	—	—	14	·64	—	—	71	3·22	49	2·23	13	·59	23	1·04	26	1·18	10	·45	282	12·80
Chorlton-cum-Hardy	41571	1	·02	—	—	1	·02	16	·39	—	—	154	3·71	101	2·43	14	·34	45	1·08	19	·46	17	·41	547	13·16
Collegiate Church	8121	—	—	—	—	1	·12	13	1·60	3	·37	13	5·29	18	2·22	8	·98	18	2·22	11	1·35	11	1·35	162	19·95
Collyhurst	12283	1	·08	—	—	1	·08	14	1·14	1	·08	35	2·85	24	1·95	13	1·06	28	2·28	11	·90	2	·16	179	14·57
Crumpsall	24250	—	—	—	—	—	—	15	·62	2	·08	95	3·92	47	1·94	12	·49	22	·91	12	·49	10	·41	297	12·25
Didsbury	30868	—	—	—	—	—	—	13	·42	3	·10	121	3·92	71	2·30	18	·58	13	·42	21	·68	19	·62	395	12·80
Exchange	82	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	12·19	—	—	—	—	2	24·39
Gorton North	21767	—	—	1	·05	1	·05	14	·64	2	·09	90	4·13	43	1·97	17	·78	23	1·06	14	·64	8	·37	282	12·95
Gorton South	26229	1	·04	—	—	2	·08	15	·57	1	·01	95	3·62	46	1·75	13	·50	37	1·41	13	·50	22	·84	331	12·62
Harpurhey	18394	1	·05	—	—	—	—	11	·60	1	·05	71	3·86	37	2·01	14	·76	31	1·68	16	·87	9	·49	242	13·16
Levenshulme	19597	—	—	—	—	—	—	8	·41	—	—	76	3·88	38	1·94	14	·71	23	1·17	14	·71	5	·26	273	13·93
Longsight	25439	—	—	—	—	—	—	13	·51	2	·08	109	4·28	50	1·96	10	·39	35	1·38	20	·79	10	·39	316	13·60
Medlock Street	15351	2	·13	—	—	—	—	13	·85	3	·20	50	3·26	34	2·21	9	·59	23	1·50	17	1·11	9	·59	234	15·24
Miles Platting	14535	—	—	—	—	2	·14	12	·33	—	—	42	2·89	29	1·99	14	·76	20	1·38	16	1·10	7	·48	205	14·10
Moston	29118	2	·07	—	—	—	—	10	·34	—	—	100	3·43	50	1·72	17	·58	34	1·07	14	·48	10	·31	322	11·06
Moss Side East	16608	1	·06	—	—	—	—	7	·42	—	—	68	4·09	48	2·89	11	·66	14	·84	18	1·08	7	·42	268	16·14
Moss Side West	19222	1	·05	—	—	—	—	16	·83	2	·10	81	4·21	41	2·29	12	·62	29	1·51	12	·62	12	·62	304	15·66
New Cross	12640	—	—	—	—	—	—	14	1·11	—	—	57	4·54	41	3·24	10	·79	10	3·17	13	1·03	11	·87	252	19·91
Newton Heath	20753	—	—	—	—	—	—	13	·63	1	·05	103	4·96	47	2·26	24	1·16	33	1·59	12	·58	13	·63	329	15·85
Openshaw	18398	1	·05	1	·05	1	·05	49	1·93	—	—	69	3·75	30	1·63	18	·98	20	1·09	18	·98	9	·49	251	13·64
Oxford	192	—	—	—	—	—	—	4	20·83	—	—	7	36·46	6	31·25	2	10·42	2	10·42	—	—	—	—	22	114·58
Rusholme	20056	1	·05	—	—	—	—	20	1·00	—	—	84	4·19	42	2·09	11	·55	22	1·10	14	·70	12	·60	288	14·36
St. Ann's	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	58·82	—	—	—	—	1	58·82
St. Clement's	753	—	—	—	—	—	—	—	—	—	—	1	5·31	2	2·66	—	—	1	1·33	—	—	1	1·33	12	15·91
St. George's	16097	1	·06	—	—	2	·12	15	·93	2	·12	49	3·04	33	2·05	20	1·24	26	1·62	15	·93	7	·43	253	15·72
St. John's	1529	—	—	—	—	—	—	1	·65	1	·65	8	5·23	9	5·89	2	1·31	7	4·58	5	3·27	2	1·31	48	31·39
St. Luke's	20044	2	·10	1	·05	1	·05	26	1·30	5	·25	104	5·19	53	2·64	22	1·10	36	1·80	28	1·40	13	·65	418	20·85
St. Mark's	19317	—	—	1	·05	1	—	16	·83	2	·10	58	3·00	36	1·86	15	·78	35	1·81	24	1·24	6	·31	278	14·39
St. Michael's	11496	—	—	—	—	—	·09	18	1·57	1	·09	46	4·00	21	2·09	16	1·39	25	2·17	11	1·22	3	·26	204	17·71
Withington	19050	—	—	—	—	1	·02	33	·67	1	·08	162	3·30	74	1·51	21	·13	31	·63	22	·45	24	·49	536	10·93
Wythenshawe	44229	—	—	—	—	—	—	27	·61	—	—	103	2·33	53	1·20	10	·23	24	·54	29	·66	16	·36	412	9·31

Manchester, 1947—Causes of Death in Infancy and Childhood.

(Figures compiled by Medical Officer of Health for 52 weeks)

CAUSES OF DEATH	UNDER ONE YEAR			Total under One Year	ONE AND UNDER FIVE YEARS				Total under Five Years
	Under 3 months	3-6 months	6-12 months		1-	2-	3-	4-	
All Causes	659	172	122	953	65	23	16	15	1072
Chicken Pox.....	...	...	...	...	...	...	1	...	1
Measles .....	...	2	9	11	5	2	...	1	19
Scarlet Fever.....	...	...	...	...	...	...	...	...	...
Whooping Cough	2	5	5	12	5	1	...	1	19
Diphtheria.....	...	...	...	...	...	...	...	...	...
Erysipelas .....	...	...	...	...	...	...	...	...	...
Syphilis	3	1	...	4	...	...	...	...	4
Tabes Mesenterica and Tuberc. Peritonitis	...	...	...	...	...	...	...	...	...
Tubercular Meningitis .....	...	...	4	4	5	1	3	...	13
Tuberculosis (Other) .....	...	1	4	5	7	1	1	1	15
Rickets .....	...	...	...	...	...	...	...	...	...
Premature Birth	182	2	...	184	...	...	...	...	184
Injury at Birth and Congen. Malformations	108	13	7	128	4	1	1	...	134
Atelectasis	54	2	1	57	...	...	...	...	57
Others of early infancy	49	...	...	49	...	...	...	...	49
Convulsions	6	3	...	9	2	...	...	...	11
Meningitis.....	...	2	2	4	1	1	...	...	6
Nervous Diseases (Other)...	6	6	5	17	1	...	...	...	18
Diarrhoeal Diseases	128	62	35	225	7	...	...	...	232
Gastritis.....	...	...	...	...	...	...	...	...	...
Digestive Diseases (Other)	...	...	...	...	...	...	...	...	...
Bronchitis	8	5	3	16	4	2	2	1	25
Pneumonia	74	47	32	153	13	4	...	1	171
Respiratory Diseases(Other)	7	1	4	12	...	...	...	...	12
Found Dead in Bed (over- laid)	7	5	...	12	...	...	...	...	12
Suffocation	7	2	1	10	1	...	...	...	11
Violence (Other forms).....	6	1	1	8	2	3	4	6	23
Ill-defined Causes	1	...	...	1	...	1	...	...	2
Other Causes	11	12	9	32	8	6	4	4	54

INFANT MORTALITY.

Deaths from Various Causes per 1,000 Live Births.

Calculated from Registrar General's Return.

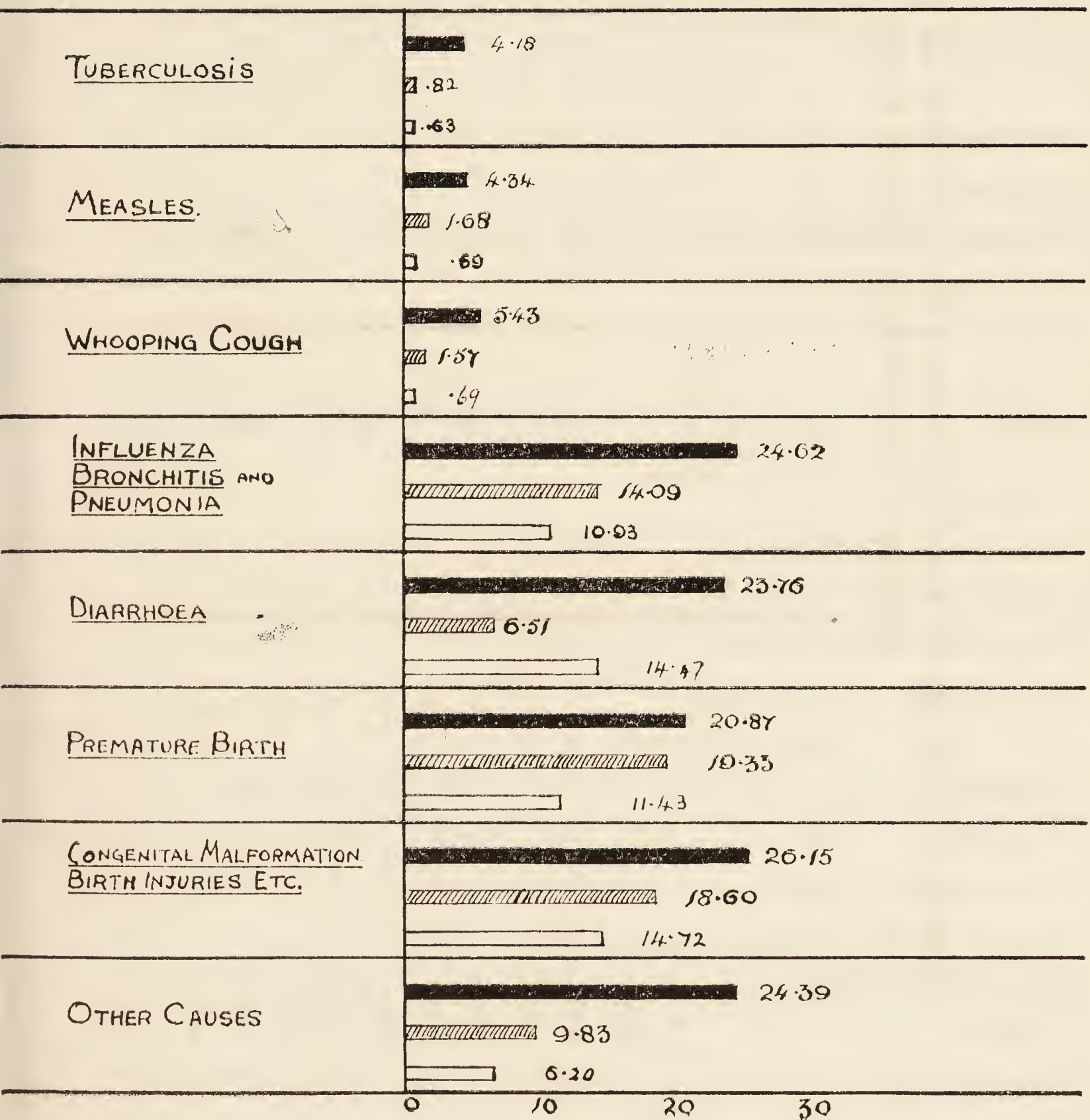
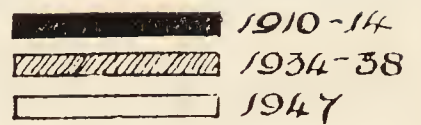
Manchester.

Cause of Death	Rate per 1,000 Live Births					
	1942	1943	1944	1945	1946	1947
All causes	64.52	60.88	53.59	55.80	63.71	59.76
Typhoid and Paratyphoid Fevers ..	..	..	..	..	..	..
Cerebro Spinal Fever	0.39	0.36	0.16	0.44	0.29	0.13
Scarlet Fever .. .. .	..	..	..	..	..	..
Whooping Cough	0.97	1.61	1.06	1.06	1.57	0.69
Diphtheria	0.29	..	..	..	..	..
Tuberculosis of Respiratory System..	0.10	0.09	..	0.26	0.22	0.25
Other forms of Tuberculosis	0.49	0.27	0.41	0.35	0.64	0.38
Syphilitic Diseases	0.78	0.63	0.41	0.53	0.43	0.19
Influenza	0.10	0.45	0.33	0.18	0.21	0.19
Measles	0.39	0.27	0.16	0.26	0.14	0.69
Acute Poliomyelitis and Polioen- cephalitis .. .. .	..	..	..	..	..	..
Acute Infectious Encephalitis .. ..	..	..	..	..	..	0.06
Cancer of all Sites .. .. .	..	..	..	..	..	..
Intra-Cranial Vascular Lesions ..	0.10	..	..	0.26	0.29	0.19
Heart Disease .. .. .	..	..	..	..	..	..
Other Diseases of Circulatory System	..	..	..	..	..	0.06
Bronchitis	1.46	2.95	1.39	2.55	1.58	1.01
Pneumonia	8.37	10.10	8.93	8.54	8.95	9.73
Other Respiratory Diseases	0.58	0.54	0.24	0.44	0.57	0.44
Diarrhoea (under 2 years)	8.56	7.60	5.90	7.30	11.96	14.47
Other Digestive Diseases	1.26	0.89	0.65	0.53	0.57	0.69
Nephritis .. .. .	..	0.09	..	..	0.07	0.25
Premature Birth	18.20	14.93	13.44	11.35	13.74	11.43
Congenital Malformations, Birth Injuries, and Infantile Diseases ..	16.35	14.93	14.50	16.63	17.40	14.72
Violent Causes	1.07	0.89	1.88	1.41	1.79	1.83
All other causes	5.06	4.29	4.10	3.70	3.29	2.72

CITY OF MANCHESTER

INFANT MORTALITY

MORTALITY PER 1000 LIVE BIRTHS



Deaths under One Year of Age from Premature Birth, Diarrhoea, and Other Causes, 1938-1947.
Manchester—(From Registrar-General's Returns).

Year	Premature Birth		Diarrhoea		Other Causes		Total Deaths	Infant Mortality Rate per 1,000 Live Births
	Deaths	Rate per 1,000 Live Births	Deaths	Rate per 1,000 Live Births	Deaths	Rate per 1,000 Live Births		
1938 ..	192	17.4	74	6.7	495	44.9	761	69.0
1939 ..	161	15.5	60	5.8	413	39.8	634	61.1
1940 ..	146	14.0	70	6.7	513	49.4	729	70.2
1941 ..	176	17.9	109	11.0	547	55.5	832	84.5
1942 ..	187	18.2	88	8.6	388	37.8	663	64.5
1943 ..	167	14.9	85	7.6	429	38.4	681	60.8
1944 ..	164	13.4	72	5.9	418	34.3	654	53.6
1945 ..	129	11.4	83	7.3	422	37.1	634	55.8
1946 ..	192	13.7	167	12.0	531	38.0	890	63.7
1947 ..	181	11.4	223	14.1	542	34.3	946	59.8

From Registrar-General's Return.

YEAR	LIVE BIRTHS, ENGLAND AND WALES				LIVE BIRTHS, MANCHESTER			
	Total	Legitimate	Illegitimate	Illegitimate % of total live births	Total	Legitimate	Illegitimate	Illegitimate % of total live births
1912 ..	872,737	835,209	37,528	4.30	18,311	17,576	735	4.01
1913 ..	881,890	843,981	37,909	4.30	18,791	18,018	773	4.11
1914 ..	879,096	841,767	37,329	4.25	18,779	17,972	807	4.30
1915 ..	814,614	778,369	36,245	4.45	16,696	15,956	740	4.43
1916 ..	785,520	747,831	37,689	4.80	15,597	14,901	696	4.46
1917 ..	668,346	631,189	37,157	5.56	12,937	12,195	742	5.74
1918 ..	662,773	621,620	41,153	6.21	12,926	12,053	873	6.75
1919 ..	692,438	650,562	41,876	6.05	13,686	12,758	928	6.78
1920 ..	957,994	913,727	44,267	4.62	19,213	18,253	960	4.99
1921 ..	848,814	810,196	38,618	4.52	17,549	16,647	902	5.14
1922 ..	780,124	745,986	34,138	4.38	15,787	15,013	774	4.90
1923 ..	758,131	726,609	31,522	4.16	15,388	14,677	711	4.62
1924 ..	729,933	699,637	30,296	4.15	14,483	13,826	657	4.54
1925 ..	710,582	681,686	28,896	4.07	14,162	13,493	669	4.72
1926 ..	694,563	664,972	29,591	4.26	13,969	13,290	679	4.86
1927 ..	654,172	625,149	29,023	4.35	13,036	12,388	648	4.97
1928 ..	660,267	630,565	29,702	4.50	12,902	12,256	646	5.01
1929 ..	643,673	614,366	29,307	4.55	13,058	12,380	678	5.19
1930 ..	648,811	619,129	29,682	4.57	12,851	12,178	673	5.24
1931 ..	632,081	603,995	28,086	4.44	12,337	11,694	643	5.21
1932 ..	613,972	586,961	27,011	4.39	11,825	11,206	619	5.24
1933 ..	580,413	555,005	25,408	4.37	11,156	10,582	574	5.15
1934 ..	597,642	571,857	25,785	4.31	11,555	10,974	581	5.03
1935 ..	598,756	573,651	25,105	4.19	11,379	10,842	537	4.72
1936 ..	605,292	580,397	24,895	4.11	11,231	10,681	550	4.90
1937 ..	610,557	585,216	25,341	4.15	10,786	10,268	518	4.80
1938 ..	621,204	594,825	26,379	4.25	11,025	10,468	557	5.05
1939 ..	619,352	593,410	25,942	4.19	10,378	9,807	571	5.50
1940 ..	607,029	581,156	25,873	4.26	10,388	9,873	515	4.96
1941 ..	587,228	556,297	30,931	5.27	9,849	9,239	610	6.19
1942 ..	654,039	617,845	36,194	5.53	10,276	9,680	596	5.80
1943 ..	682,654	639,549	43,105	6.31	11,185	10,431	754	6.74
1944 ..	745,318	692,933	52,385	7.03	12,204	11,239	965	7.91
1945 ..	685,273	621,209	64,064	9.35	11,362	10,175	1,187	10.45
1946 ..	819,894	764,990	54,904	6.70	13,969	12,874	1,095	7.84
*1947 ..	886,633	840,581	46,052	5.19	15,830	14,760	1,070	6.76

* Figures for England and Wales for 1947 are provisional.

**Deaths of Infants under One Year of Age.
Manchester, 1912 to 1947.
From Registrar-General's Return.**

Year	Total live births	Total deaths under one year	Deaths per 1,000 of the total live births	Legitimate births	Legitimate deaths	Deaths per 1,000 legitimately born	Illegitimate births	Illegitimate deaths	Deaths per 1,000 illegitimately born
1912	18,311	2,251	122.93	17,576	2,082	118.46	735	169	229.93
1913	18,791	2,415	128.52	18,018	2,239	124.26	773	176	227.68
1914	18,779	2,423	129.03	17,972	2,218	123.41	807	205	254.03
1915	16,696	2,141	128.24	15,956	1,959	122.78	740	182	245.95
1916	15,597	1,737	111.37	14,901	1,578	105.90	696	159	228.45
1917	12,937	1,438	111.15	12,196	1,262	103.48	742	176	237.20
1918	12,926	1,381	106.83	12,053	1,201	100.00	873	180	206.19
1919	13,686	1,333	97.40	12,758	1,173	91.94	928	160	172.41
1920	19,213	1,882	97.95	18,253	1,169	91.44	960	213	221.88
1921	17,549	1,713	97.61	16,647	1,542	92.63	902	171	189.58
1922	15,787	1,525	96.60	15,013	1,375	91.59	774	150	193.80
1923	15,388	1,360	88.35	14,677	1,243	84.69	711	117	164.56
1924	14,483	1,454	100.39	13,826	1,316	95.18	657	138	210.05
1925	14,162	1,364	96.31	13,493	1,251	92.72	669	113	168.91
1926	13,969	1,216	87.05	13,290	1,116	83.97	679	100	147.28
1927	13,036	1,122	86.07	12,388	1,032	83.31	648	90	138.89
1928	12,902	1,179	91.38	12,256	1,084	88.44	646	95	147.06
1929	13,058	1,272	97.41	12,380	1,144	92.41	678	128	188.79
1930	12,851	995	77.43	12,178	881	72.34	673	114	169.39
1931	12,337	1,049	85.03	11,694	956	81.75	643	93	144.64
1932	11,825	1,015	85.83	11,206	934	83.35	619	81	130.86
1933	11,156	834	74.76	10,582	769	72.67	574	65	113.24
1934	11,155	798	69.06	10,974	742	67.61	581	56	96.39
1935	11,379	809	71.09	10,842	757	69.82	537	52	96.83
1936	11,231	863	76.84	10,681	816	76.40	550	47	85.45
1937	10,786	823	76.30	10,268	770	74.99	518	53	102.32
1938	11,025	761	69.03	10,468	702	67.06	557	59	105.92
1939	10,378	634	61.09	9,807	587	59.85	571	47	82.31
1940	10,388	729	70.18	9,873	677	68.57	515	52	100.97
1941	9,849	832	84.47	9,239	677	68.57	610	65	106.56
1942	10,276	663	64.52	9,680	621	64.15	596	42	70.47
1943	11,185	681	60.88	10,431	625	59.92	754	56	74.27
1944	12,204	654	53.59	11,239	577	51.34	965	77	79.79
1945	11,362	634	55.80	10,175	557	54.74	1,187	77	64.87
1946	13,969	890	63.71	12,874	798	61.98	1,095	92	84.02
1947	15,830	946	59.76	14,760	859	58.20	1,070	87	81.31

(Figures Compiled by the Medical Officer of Health for 52 Weeks.)

WARDS	LIVE BIRTHS				DEATHS UNDER 1 YEAR					
	Total	Legitimate	Illegitimate	% Illegitimate to Total Live Births	Total	Legitimate	Illegitimate	Rate per 1000 Live Births	Rate per 1000 Live Births Legitimate	Rate per 1000 Live Births Illegitimate
CITY OF MANCHESTER..	15830	14760	1070	6.76	953	870	83	60.20	58.94	77.57
All Saints'	366	314	52	14.21	43	36	7	117.49	114.65	134.62
Ardwick	513	470	43	8.38	42	39	3	81.87	82.98	69.77
Beswick ..	522	501	21	4.02	33	31	2	63.22	61.88	95.24
Blackley..	725	698	27	3.72	26	25	1	35.86	35.82	37.04
Bradford	645	615	30	4.65	30	29	1	46.51	47.15	33.33
Cheetham	462	434	28	6.06	25	22	3	54.11	50.69	107.14
Chorlton-cum-Hardy	725	695	30	4.14	29	26	3	40.00	37.41	100.00
Collegiate Church..	225	204	21	9.33	16	14	2	71.11	68.63	95.24
Collyhurst	393	377	16	4.07	23	19	4	58.52	50.40	250.00
Crumpsall	511	493	18	3.52	21	21	—	41.10	42.60	—
Didsbury	476	451	25	5.25	31	28	3	65.13	62.08	120.00
Exchange	2	2	—	—	—	—	—	—	—	—
Gorton North	399	378	21	5.26	22	21	1	55.14	55.56	47.62
Gorton South	529	499	30	5.67	26	24	2	49.15	48.10	66.67
Harpurhey ..	538	510	28	5.20	26	25	1	48.33	49.02	35.72
Levenshulme	322	291	31	9.63	19	18	1	59.01	61.86	32.26
Longsight ..	465	437	28	6.02	25	23	2	53.76	52.63	71.43
Medlock Street	434	398	36	8.29	36	31	5	82.95	77.89	138.89
Miles Platting	493	456	37	7.51	25	24	1	50.71	52.63	27.03
Moston ..	604	580	24	3.97	15	11	4	24.83	18.97	166.67
Moss Side East	477	397	80	16.77	36	32	4	75.47	80.61	50.00
Moss Side West	478	426	52	10.88	23	17	6	48.12	39.91	115.38
New Cross ..	354	334	20	5.65	19	18	1	53.67	53.89	50.00
Newton Heath	537	510	27	5.03	28	27	1	52.14	52.94	37.04
Openshaw ..	464	433	31	6.68	27	26	1	58.19	60.05	32.26
Oxford ..	7	7	—	—	—	—	—	—	—	—
Rusholme	367	343	24	6.54	27	25	2	73.57	72.89	83.33
St. Ann's	1	1	—	—	—	—	—	—	—	—
St. Clement's	17	17	—	—	—	—	—	—	—	—
St. George's ..	513	467	46	8.97	44	41	3	85.77	87.79	65.22
St. John's ..	41	36	5	12.20	10	10	—	243.90	277.78	—
St. Luke's ..	559	460	99	17.71	56	48	8	100.18	104.35	80.81
St. Mark's ..	550	508	42	7.64	38	33	5	69.09	64.96	119.05
St. Michael's	380	358	22	5.79	28	26	2	73.68	72.63	90.91
Withington ..	837	804	33	3.94	50	49	1	59.74	60.95	30.30
Wythenshawe	899	856	43	4.78	54	51	3	60.07	59.58	69.77

Stillbirths, Neo-Natal Deaths, and Deaths at Four Weeks to One Year of Age per 1,000 Births
(Live and Stillbirth), also Infant Death Rate per 1,000 Live Births.
Manchester.

Year	Total live and stillbirths	STILLBIRTHS		NEO-NATAL DEATHS		DEATHS, 4 WEEKS— 1 YEAR		DEATHS UNDER 1 YEAR AND STILLBIRTHS		Infant death rate per 1,000 live births
		Number of stillbirths	Rate per 1,000 live and stillbirths	Number of neo-natal deaths, 0-4 weeks	Rate per 1,000 total live and stillbirths	Number of deaths, 4 weeks— 1 year	Rate per 1,000 total live and stillbirths	Number of deaths under 1 year and stillbirths	Rate per 1,000 total live and stillbirths	
1930 ..	13,490	639	47.37	413	30.62	582	43.14	1,634	121.13	77.43
1931 ..	12,965	628	48.44	417	32.16	632	48.75	1,677	129.35	85.03
1932 ..	12,386	561	45.29	418	33.75	597	48.20	1,576	127.24	85.83
1933 ..	11,738	582	49.58	385	32.80	449	38.25	1,416	120.63	74.76
1934 ..	12,090	535	44.25	390	32.26	408	33.75	1,333	110.26	69.06
1935 ..	11,925	546	45.79	381	31.95	428	35.89	1,355	113.63	71.09
1936 ..	11,762	531	45.15	385	32.73	478	40.64	1,394	118.52	76.84
1937 ..	11,254	468	41.59	381	33.86	442	39.28	1,291	114.71	76.30
1938 ..	11,532	507	43.96	351	30.44	410	35.55	1,268	109.95	69.03
1939 ..	10,870	492	45.26	321	29.53	313	28.80	1,126	103.59	61.09
1940 ..	10,866	478	43.99	295	27.15	434	39.94	1,207	111.08	70.18
1941 ..	10,249	400	39.03	292	28.49	540	52.69	1,232	120.21	84.47
1942 ..	10,719	443	41.33	304	28.36	359	33.49	1,106	103.18	64.52
1943 ..	11,591	406	35.02	306	26.40	375	32.35	1,087	93.77	60.88
1944 ..	12,571	367	29.19	315	25.06	339	26.97	1,021	81.22	53.59
1945 ..	11,734	372	31.70	311	26.50	323	27.53	1,006	85.73	55.80
1946 ..	14,414	445	30.87	474	32.88	416	28.86	1,335	92.62	63.71
1947 ..	16,257	427	26.27	468	28.79	485	29.83	1,380	84.89	59.76

Notifiable Infectious Diseases other than Tuberculosis.

The following cases were notified in the various Wards of the City during the year ended December 31st, 1947:—

	Typhoid Fever	Paratyphoid Fever	Cerebro-spinal Fever	Scarlet Fever	Whooping Cough	Diphtheria	Erysipelas	Ophthalmia Neonatorum	Dysentery	Malaria (contracted in England & Wales)	Relapsing Fever	Smallpox	Measles	Poliomyelitis (acute)	Polio- encephalitis (acute)	Encephalitis Lethargica (acute)	Typhus Fever	Primary Pneumonia	Broncho Pneumonia	Influenzal Pneumonia	Puerperal Pyrexia	German Measles	Pemphigus Neonatorum	Total Cases of Infectious Disease	
Total for City	3	1	23	939	2,308	80	128	98	41	1	—	—	9,008	123	1	1	—	552	169	49	309	1,247	16	15,097	
WARDS																									
ALL SAINTS'	—	1	1	15	50	3	2	6	1	—	—	—	84	3	—	—	—	10	13	—	56	11	—	259	
ARDWICK	—	—	—	8	49	3	2	—	—	—	—	—	275	1	1	—	—	4	4	—	8	39	—	395	
BESWICK	—	—	—	44	27	3	4	2	—	—	—	—	287	2	—	—	—	30	2	1	7	26	—	434	
BLACKLEY	—	—	3	34	129	1	3	2	—	—	—	—	486	2	—	—	—	20	6	—	14	15	2	721	
BRADFORD	—	—	2	38	47	10	3	1	1	—	—	—	308	8	—	—	—	35	3	—	14	37	—	508	
CHEETHAM	—	—	—	50	93	1	11	3	—	—	—	—	296	2	—	—	—	12	1	3	6	19	1	498	
CHORLTON-CUM-HARDY	—	—	2	34	120	1	5	5	—	—	—	—	376	10	—	—	—	25	4	1	12	73	—	677	
COLLEGIATE CHURCH	—	—	1	14	21	1	—	3	—	—	—	—	123	1	—	—	—	4	1	—	2	3	—	177	
COLLYHURST	—	—	2	11	40	3	4	4	1	—	—	—	288	1	—	—	—	13	1	1	4	14	—	384	
CRUMPSALL	—	—	1	23	39	—	1	1	—	—	—	—	428	5	—	—	—	12	1	3	7	21	—	545	
DIDSBURY	—	—	1	54	94	1	14	—	—	—	—	—	384	6	—	—	—	20	4	—	13	89	—	680	
EXCHANGE	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	1	—	—	4	
GORTON NORTH	—	—	—	40	72	2	1	3	—	—	—	—	286	3	—	—	—	14	7	—	5	75	—	508	
GORTON SOUTH	—	—	1	46	87	5	3	5	—	—	—	—	386	7	—	—	—	18	4	8	9	96	—	675	
HARPURHEY	—	—	1	27	52	2	4	2	—	—	—	—	439	2	—	—	—	16	1	1	9	16	1	573	
LEVENSHULME	—	—	—	31	28	—	4	—	—	—	—	—	83	5	—	—	—	8	1	—	9	35	—	204	
LONGSIGHT	—	—	1	26	130	3	6	2	—	—	—	—	276	3	—	—	—	13	2	—	10	76	—	548	
MEDLOCK STREET	—	—	—	21	51	1	2	4	—	—	—	—	63	1	—	—	—	14	8	3	5	34	1	298	
MILES PLATTING	—	—	—	15	34	5	3	4	1	—	—	—	323	1	—	—	—	21	7	1	10	11	2	438	
MOSTON	—	—	1	47	134	1	3	7	1	—	—	—	421	2	—	—	—	17	1	5	5	16	2	663	
MOSS SIDE EAST	—	—	1	15	45	1	3	7	—	—	—	—	130	3	—	—	—	18	4	—	6	23	—	256	
MOSS SIDE WEST	—	—	2	9	46	4	5	4	—	—	—	—	244	6	—	—	—	8	3	2	13	25	—	371	
NEW CROSS	—	—	—	12	34	3	1	4	—	1	—	—	207	1	—	—	—	21	10	1	9	16	1	321	
NEWTON HEATH	—	—	—	51	141	—	7	4	—	—	—	—	428	2	—	—	—	39	31	6	12	6	1	728	
OPENSHAW	—	—	1	27	57	3	4	5	—	—	—	—	243	4	—	—	—	23	5	—	9	33	1	415	
OXFORD	—	—	—	—	—	—	—	—	—	—	—	—	10	—	—	—	—	—	—	—	4	1	—	15	
RUSHOLME	—	—	—	16	94	3	3	1	—	—	—	—	203	9	—	—	—	11	—	1	7	58	1	407	
ST. ANN'S	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
ST. CLEMENT'S	—	—	—	—	—	—	—	—	—	—	—	—	9	—	—	—	—	—	—	—	2	—	—	11	
ST. GEORGE'S	—	—	—	41	65	1	4	5	—	—	—	—	90	2	—	—	—	24	4	—	2	18	—	256	
ST. JOHN'S	—	—	—	2	24	—	—	—	—	—	—	—	26	—	—	—	—	3	—	—	—	2	—	57	
ST. LUKE'S	—	—	—	6	57	6	7	7	1	—	—	—	224	5	—	—	—	9	9	1	9	14	—	355	
ST. MARK'S	—	—	—	34	102	8	3	3	1	—	—	—	314	6	—	—	—	23	12	—	4	115	—	628	
ST. MICHAEL'S	—	—	—	5	33	3	—	1	—	—	—	—	185	—	—	—	—	12	1	—	3	9	2	254	
WITHINGTON	—	—	1	85	135	2	8	4	—	—	—	—	353	8	—	1	—	14	6	3	10	69	—	700	
WYTHENSHAW	—	—	—	58	176	—	5	2	2	—	—	—	727	12	—	—	—	41	13	4	13	149	—	1192	
HOSPITALS AND INSTITUTIONS	—	—	—	—	—	—	—	—	32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32	

INFECTIOUS DISEASES.

The deaths from the more common diseases are shown in the following figures :—

	Years	
	1942-46 Average	1947
Measles	10	21
Whooping Cough	28	18
Scarlet Fever	—	—
Diphtheria	18	4
Influenza	96	36
Pneumonia (all forms)	391	452
Enteric Fever	1	—
Diarrhoea	102	229
Pulmonary Tuberculosis	517	450

Consultations.

122 consultation visits were made during the year by medical officers of the Department at the request of medical practitioners in the City in connection with the diagnosis of cases of infectious disease in which the nature of the illness was in doubt. 100 of these visits were made in connection with the outbreak of poliomyelitis.

SMALLPOX.

No case of smallpox occurred in Manchester during the year.

PUBLIC VACCINATION.

There are 26 public vaccinators and 4 vaccination officers.

The percentage of infants successfully vaccinated in Manchester was 61.11 in 1946. The percentages for the last five years were :—

Year	Percentage
1942	58.34
1943	59.19
1944	58.72
1945	59.22
1946	61.11

The following is a summary of the return made to the Ministry of Health of vaccinations for the year *1946 :—

	Numbers	Percentage
Successful vaccinations	8,994	61·11
Insusceptible of vaccination	46	0·31
Statutory declarations of conscientious objection	2,981	20·26
Died unvaccinated	815	5·54
Postponement by medical certificate	116	0·78
Not traceable (removed to other districts or postponed) ..	1,765	12·00
Total (= Number of children born)	14,717	100·00

* Returns for vaccination are always for the year preceding the year covered by this report. This is unavoidable, since the period of four months from the date of birth is allowed for exemption purposes.

SCARLET FEVER.

There were 939 known cases of scarlet fever in 1947.

There were no deaths and the type of disease continued to be mild compared with that which was prevalent in former years.

38 per cent. of the patients were removed to hospital, and a review of these cases is contained in a statement of the Medical Superintendent of Monsall Hospital.

1947—Scarlet Fever Cases in Wards, with Attack Rate, Case Mortality, and Removals to Hospital per cent.

Wards	Cases	Attack Rate per 1,000 Living	Case Mortality per cent.	Removals to Hospital per cent.
City	939	1.37	—	38
All Saints'	15	1.17	—	53
Ardwick	8	0.45	—	50
Beswick	44	2.05	—	25
Blackley	34	1.21	—	47
Bradford	38	1.50	—	42
Cheetham.. .. .	50	2.27	—	50
Chorlton-cum-Hardy ..	34	0.82	—	44
Collegiate Church	14	1.72	—	57
Collyhurst	11	0.90	—	45
Crumpsall	23	0.95	—	35
Didsbury	54	1.75	—	41
Exchange	—	—	—	—
Gorton North	40	1.84	—	38
Gorton South	46	1.75	—	28
Harpurhey	27	1.47	—	33
Levenshulme	31	1.58	—	29
Longsight	26	1.02	—	42
Medlock Street	21	1.37	—	38
Miles Platting	15	1.03	—	67
Moston	47	1.61	—	40
Moss Side East	15	0.90	—	60
Moss Side West	9	0.47	—	22
New Cross	12	0.95	—	59
Newton Heath	51	2.46	—	37
Openshaw	27	1.47	—	44
Oxford	—	—	—	—
Rusholme.. .. .	16	0.80	—	31
St. Ann's	—	—	—	—
St. Clement's	—	—	—	—
St. George's	41	2.55	—	39
St. John's	2	1.31	—	100
St. Luke's	6	0.30	—	50
St. Mark's	34	1.76	—	26
St. Michael's	5	0.44	—	60
Withington	85	1.73	—	21
Wythenshawe	58	1.31	—	29

Scarlet Fever "Return" Cases, 1947.

Out of 377 discharges from Monsall Hospital, 8 gave rise to at least 8 "return" cases, a "return" case rate per cent. of 2.1 as compared with 1.4 in 1946.

The following table shows the interval in days between return home of hospital patients and onset of illness in “return ” cases.

Days	0-6	7-13	14-20	21-27
No. of Cases	3	1	2	2

DIPHThERIA.

The following figures show the number of cases notified and accepted as diphtheria each year for the last ten years :—

1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
1,193	799	716	770	589	791	266	302	259	80

Mortality.

The case mortality rate in 1947 was 5·00 per cent. compared with an average of 3·74 in the previous five years. The death rate per 1,000 of the population in Manchester was 0·01 compared with 0·01 in the country as a whole.

TABLE 1.

Diphtheria.—Manchester Case Mortality Rates per cent. in Age Groups.

	0-5 years	5-10 years	10-15 years	15 years and over
1901-10	33·5	17·8	6·0	4·5
1938-47	6·1	6·3	2·2	1·8
Percentage Reduction	82	65	63	60

“ Carriers ” and the Virulence Test.

Of the total number of formal notifications received it was found on investigation that 18 related to persons who were merely “ carriers ” of diphtheria. In addition, a further “ carrier ” was discovered who was not notified as suffering from diphtheria.

The following table relates to 11 “ carriers ” in which a virulence test was made and is of interest in showing the types of “ carriers ” and the number who were capable of spreading infection.

Diphtheria “ Carriers ” and Virulence Tests, 1947.

Type	No. of “ Carriers ”	No. Virulent	No. Non-virulent	Per cent. Virulent
Nose	4	2	2	50·0
Throat	6	3	3	50·0
Ear	1	—	1	—
Total	11	5	6	45·5

Swabs.

A total of 159 swabs were submitted to the Public Health Laboratory upon request by medical practitioners during the year and, of these, 11 or 6·9 per cent. proved positive. So far as was practicable, swabs were taken from the throats and noses of all members under 14 years of age of each family where there had occurred a case of diphtheria.

Supply of Antitoxin.

Diphtheria antitoxin, in phials containing 8,000 units, is supplied free of charge to all medical practitioners for the treatment of persons residing temporarily or permanently in the City, and it may be obtained from the Health Department during office hours or at any time from the following fire stations :—Ash Street, Harpurhey ; New Street, Miles Platting ; Upton Street, Chorlton-upon-Medlock. It may also be obtained at any time from all of the district police stations. The total quantity supplied in this manner in 1947 was 384 phials (3,072,000 units), at a cost of £124 16s. 0d.

The following table shows that the number of attacks is highest in children up to 10 years.

TABLE II.

Diphtheria.—Number of Cases, of Deaths, and Case Mortality at Different Ages for the Fifty-Six Years, 1891–1946 and for 1947.

Ages	1891–1946			1947		
	Cases	Deaths	* Case Mortality per cent.	Cases	Deaths	* Case Mortality per cent.
Under 1 year	642	316	49·00	1	—	—
1 to 2 years	1,608	638	40·00	5	—	—
2 to 3 „	2,440	652	27·00	4	—	—
3 to 4 „	3,168	659	21·00	12	—	—
4 to 5 „	3,587	592	17·00	4	—	—
5 to 6 „	3,888	518	13·00	6	—	—
6 to 7 „	3,355	348	10·00	5	1	20·00
7 to 8 „	2,681	250	9·00	3	—	—
8 to 9 „	2,223	198	9·00	5	—	—
9 to 10 „	1,679	140	8·00	1	1†	100·0
10 to 15 „	5,226	202	4·00	14	1	7·1
15 to 20 „	2,098	59	3·00	4	—	—
20 to 25 „	1,243	28	2·00	5	—	—
25 to 35 „	1,393	28	2·00	7	1	14·3
35 to 45 „	566	1	0·2	—	—	—
45 and over	291	26	9·00	4	—	—
All ages	36,088	4,655	13·00	80	4	5·00

* The percentages in this column are the actual proportions of fatal cases to true cases at those ages. “Carriers” are excluded.

† This death occurred in a case which was notified in 1946.

The case mortality rate at all ages since 1938 has been as follows :—

1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
4·19	4·63	6·06	5·84	4·58	3·16	2·26	4·63	4·25	5·00

TABLE III.

Diphtheria, 1947—Cases in Wards, with Attack Rate, Case Mortality, and Removals to Hospital per cent.

Wards	Cases	Deaths	Attack Rate per 1,000 Living	Case Mortality per cent.	Removals to Hospital per cent.
City	80	4	·12	5·00	96
All Saints'	3	—	·23	—	100
Ardwick	3	—	·17	—	100
Beswick	3	—	·14	—	100
Blackley	1	—	·04	—	100
Bradford	10	—	·40	—	80
Cheetham	1	—	·05	—	100
Chorlton-cum-H.	1	—	·02	—	100
Collegiate Church	1	—	·12	—	100
Collyhurst	3	—	·24	—	100
Crumpsall	—	—	—	—	—
Didsbury	1	—	·03	—	—
Exchange	—	—	—	—	—
Gorton North ..	2	1	·09	50·00	100
Gorton South ..	5	—	·19	—	100
Harpurhey	2	—	·11	—	100
Levenshulme ..	—	—	—	—	—
Longsight	3	—	·12	—	100
Medlock Street ..	1	—	·07	—	100
Miles Platting ..	5	—	·34	—	100
Moston	1	—	·03	—	100
Moss Side East ..	1	—	·06	—	100
Moss Side West ..	4	—	·21	—	100
New Cross	3	—	·24	—	100
Newton Heath ..	—	—	—	—	—
Openshaw	3	1	·16	33·33	100
Oxford	—	—	—	—	—
Rusholme	3	—	·15	—	100
St. Ann's	—	—	—	—	—
St. Clement's ..	—	—	—	—	—
St. George's ..	1	—	·06	—	100
St. John's	—	—	—	—	—
St. Luke's	6	1*	·30	16·66	100
St. Mark's	8	1	·41	12·50	100
St. Michael's ..	3	—	·26	—	100
Withington ..	2	—	·04	—	100
Wythenshawe ..	—	—	—	—	—

* This death occurred in a case which was notified during 1946.

Immunisation against Diphtheria.

During the year 8,351 persons received a complete course of diphtheria prophylactic injections. 331 others received an incomplete course. The numbers were distributed as follows :—

TABLE A.
Number of Persons dealt with in Manchester in 1947.

	Numbers having received complete course of prophylactic	Numbers having received incomplete course of prophylactic	Numbers having received reinforcing course of prophylactic
School Clinics	84	11	101
Child Welfare Centres ..	5,223	126	68
Day Nurseries	369	6	27
Hospitals	123	37	21
Health Office	123	15	107
Mobile Unit	2,349	136	279
General Practitioners ..	80	—	—
Totals	8,351	331	603

During 1947, a Mobile Unit visited the areas of the City in which the percentage of immunised children under 5 years of age was low and areas situated at a distance from the Child Welfare Centres and Day Nurseries. This Unit was responsible for the complete immunisation of 2,349 children.

Alum Precipitated Toxoid in two doses of 0·2 c.c. and 0·5 c.c. with a 4 weeks interval is used for the majority of children under 8 years who have the treatment carried out at the welfare centres, mobile immunisation unit, and at the health office. Children aged 8—15 years receive A.P.T. in two doses of 0·2 c.c. and 0·3 c.c., while persons over 15 years receive 3 injections of T.A.F.

Two prophylactics—T.A.F. and A.P.T.—are in use at the hospitals. T.A.F. and A.P.T. is supplied free to general medical practitioners in the City.

TABLE B.
Prophylactics Used in Immunising Pre-School and School Children.

Age Group	Number having received a full course of injections	Prophylactic Used	
		T.A.F.	A.P.T.
Under 5 years	7,849	—	7,849
5—14 years	390	17	373
Totals—Under 15 years	8,239	17	8,222

Although Schick testing is not practised as a routine in connection with the greater part of the scheme, 679 primary tests were performed during the year. 96 gave a positive result and 583 were negative. These were carried out largely among hospital patients and staff, as were the 449 posterior tests which gave 5 positive and 444 negative results.

The following table illustrates the progress of the immunisation scheme since its inception :—

DIPHTHERIA IMMUNISATION.

Illustrating the progress of the immunisation scheme since its inception.

Number of Persons, in Age Groups, having had Full Course of Injections.

[illegible]

The totals at the end of 1947 indicate only approximately the immune population, since no account is taken of any deaths that may have ensued amongst the immunised children.

TYPHOID AND PARATYPHOID FEVER.

10 notification were received, the diagnosis being subsequently corrected in 6 cases. Thus 4 cases occurred, and of these 3 were infected by *B. typhosus* and 1 by *B. paratyphosus*. No deaths from typhoid fever or paratyphoid fever occurred in the City.

27 specimens of blood were submitted to the laboratory by medical practitioners from patients with illness simulating typhoid and 8 gave positive widal reactions.

Two female carriers who have persistently excreted typhoid bacilli remain under observation. No spread from these carriers has occurred over the years.

CEREBRO-SPINAL FEVER.

46 notifications were received during the year, 27 from medical practitioners, and the cases removed to Monsall Hospital, 5 of which were subsequently confirmed. Seventeen were notified from and treated in other Hospitals in the City, and 1 nursed at home, thus making a total of 23 confirmed cases of cerebro-spinal fever. The remaining notification was amended.

There were 8 deaths from this disease, giving a case mortality rate of 34·8, which compares with a rate of 24·2 per cent in 1946.

As regards seasonal prevalence, 9 cases occurred in the first quarter of the year, 6 in the second, 4 in the third, and 4 in the last quarter.

Cases of Cerebro-Spinal Fever in Age Groups and Sexes, 1947.

Age Groups	No. of Cases Males	No. of Cases Females	Total
0— 5 years	11	2	13
5—10 „	—	1	1
10—15 „	—	2	2
15—20 „	1	—	1
20—25 „	2	1	3
25—35 „	1	—	1
35 and over	2	—	2
All ages	17	6	23

POLIOMYELITIS.

Particulars of notified cases of poliomyelitis for 1947 are given in the following table :—

Case No.	Sex	Age	Ward	Onset	Notified	Paralysis	Condition—June, 1948
1	M	34	All Saints'	—	28th April	—	Outside Authority
2	M	21	Didsbury	17th June	18th June	Died	—
3	F	$\frac{8}{12}$	„	1st June	21st June	—	Unavailable
4	M	5	Harpurhey	10th July	15th July	None	Good
5	M	22	Didsbury	—	20th July	Right arm	Yielding to treatment
6	M	2	New Cross	22nd July	24th July	Left leg	Very fair
7	F	18	Rusholme	30th July	1st August	Died	—
8	M	5	Didsbury	31st July	2nd August	None	Good
9	M	3	Gorton South	1st August	3rd August	Died	—
10	F	4	Rusholme	3rd August	4th August	Right leg	Good
11	M	$2\frac{1}{2}$	St. George's	28th July	1st August	Right arm	Good
12	M	$\frac{3}{12}$	St. Mark's	30th July	31st July	None	Good
13	M	6	Gorton North	3rd August	7th August	Right leg	Good
14	M	6	Rusholme	6th August	8th August	None	Good
15	M	39	Cheetham	10th July	8th August	—	Outside Authority
16	F	11	Gorton South	11th August	12th August	None	Good
17	M	15	Didsbury	1st August	13th August	Neck	Yielding to treatment
18	M	$1\frac{1}{2}$	Openshaw	10th August	14th August	Both legs	Health good, paralysis yielding to treatment
19	F	27	Withington	8th August	15th August	None	Good
20	F	27	St. Luke's	11th August	16th August	Both legs and arms	Yielding to treatment
21	M	16	Moss Side West	8th August	18th August	None	Good
22	F	15	Wythenshawe	18th August	19th August	None	Good
23	M	17	All Saints'	12th August	19th August	—	Outside Authority
24	F	4	Chorlton-cum-Hardy ..	19th August	21st August	Died	—
25	F	3	St. Marks'	18th August	22nd August	Slight in ankle	Good
26	M	$1\frac{1}{12}$	„	20th August	25th August	None	Good
27	F	11	Gorton South	16th August	26th August	Right leg	Good. Yielding to treatment
28	M	$8\frac{1}{2}$	St. Luke's	20th August	26th August	Right leg	Quite well
29	F	15	Miles Platting	22nd August	26th August	None	Good
30	F	7	Wythenshawe	26th August	27th August	None	Good
31	F	7	Harpurhey	25th August	28th August	None	Good
32	M	6	Moss Side East	27th August	28th August	—	Left Manchester
33	M	26	Openshaw	20th August	28th August	Right leg	Good. Returned to employment
34	F	3	„	29th August	30th August	Left arm, legs, and back	Still in Hospital
35	M	1	Medlock Street	28th August	31st August	Left cheek	Good
36	F	$1\frac{9}{12}$	Ardwick	21st August	30th August	None	Good
37	F	23	Wythenshawe	17th August	22nd August	Right arm	Good. Yielding to treatment

Poliomyelitis—continued.

Case No.	Sex	Age	Ward	Onset	Notified	Paralysis	Condition—June 1948
38	F	26	Didsbury	31st August	1st Sept.	None	Good
39	F	3	Chorlton-eum-Hardy ..	28th August	1st Sept.	None	Good
40	M	$\frac{6}{12}$	Withington	22nd August	4th Sept.	—	Outside Authority
41	F	13	Bradford	4th Sept.	4th Sept.	Left leg	Yielding to treatment
42	F	$1\frac{3}{12}$	Levenshulme	31st August	5th Sept.	—	Left Manchester
43	F	2	Wythenshawe	4th Sept.	6th Sept.	Legs	Good. Yielding to treatment
44	M	2	St. Mark's	3rd Sept.	6th Sept.	None	Good
45	F	12	Longsight	3rd Sept.	6th Sept.	None	Good
46	F	6	„	3rd Sept.	7th Sept.	None	Good
47	M	8	Crumpsall	22nd August	9th Sept.	None	Good
48	F	$2\frac{2}{12}$	Rusholme	7th Sept.	9th Sept.	Right leg	Yielding to treatment; in good health
49	M	15	Bradford	8th Sept.	10th Sept.	None	Satisfactory progress
50	M	13	Newton Heath	4th Sept.	10th Sept.	Right leg	Yielding to treatment
51	F	9	Rusholme	10th Sept.	11th Sept.	Left arm	Normal health; paralysis static
52	M	9	Wythenshawe	11th Sept.	11th Sept.	—	Unavailable
53	M	$2\frac{6}{12}$	Levenshulme	7th Sept.	12th Sept.	None	Good
54	F	$1\frac{2}{12}$	Crumpsall	10th Sept.	12th Sept.	—	Left Manchester
55	M	$2\frac{1}{2}$	Chorlton-eum-Hardy ..	3rd Sept.	13th Sept.	Died	—
56	F	2	Levenshulme	9th Sept.	14th Sept.	Right leg and left foot	Good. Yielding to treatment
57	M	10	Collegiate	9th Sept.	16th Sept.	Both legs	Yielding to treatment
58	M	3	Wythenshawe	13th Sept.	16th Sept.	Left leg and foot	Yielding to treatment
59	M	22	Newton Heath	16th Sept.	18th Sept.	All limbs	Still in hospital
60	F	25	Withington	6th Sept.	17th Sept.	Right foot and arm, left leg	Yielding to treatment
61	F	35	St. Luke's	18th Sept.	22nd Sept.	Right arm and leg	Yielding to treatment
62	F	28	Chorlton-eum-Hardy ..	13th Sept.	21st Sept.	None	Good
63	F	$1\frac{8}{12}$	Moston	15th Sept.	24th Sept.	Left leg	Attending hospital for treatment. Leg in iron
64	F	21	Wythenshawe	21st Sept.	24th Sept.	—	Outside Authority
65	M	23	Longsight	18th Sept.	25th Sept.	None	Good
66	F	11	Levenshulme	14th Sept.	25th Sept.	Face	Good. Yielding to treatment.
67	M	13	Rusholme	15th Sept.	19th Sept.	—	Unavailable
68	M	6	Chorlton-eum-Hardy ..	22nd Sept.	26th Sept.	None	Satisfactory progress
69	F	9	Crumpsall	20th Sept.	26th Sept.	None	Good
70	M	$4\frac{1}{2}$	Cheetham	26th Sept.	28th Sept.	None	Good
71	F	4	Collyhurst	26th Sept.	29th Sept.	None	Satisfactory progress
72	F	$2\frac{2}{12}$	Crumpsall	20th Sept.	30th Sept.	Left foot	Satisfactory progress
73	M	$3\frac{1}{2}$	Rusholme	30th Sept.	1st October	Both legs	Yielding to treatment
74	M	16	All Saints	29th Sept.	2nd October	None	Good
75	F	19	Chorlton-eum-Hardy ..	23rd Sept.	2nd October	Died	—
76	F	4	Wythenshawe	27th Sept.	2nd October	—	Unavailable
77	M	10	Moss Side East	27th Sept.	3rd October	None	Good
78	M	26	Gorton North	29th Sept.	3rd October	Both arms	Yielding to treatment
79	F	2	Beswick	1st October	4th October	Both legs	Yielding to treatment

Poliomyelitis—continued.

Case No.	Sex	Age	Ward	Onset	Notified	Paralysis	Condition—June, 1948
80	F	4½	St. George's	25th Sept.	4th October	None	Good
81	M	1½	Gorton South	29th Sept.	6th October	None	Good
82	F	5	St. Mark's	4th Oct.	7th October	Right leg	Good
83	F	32	Gorton North	1st Oct.	8th October	None	Good
84	F	20	Withington	3rd Oct.	8th October	—	Unavailable
85	M	12	Bradford	5th Oct.	9th October	None	Good
86	M	5	Rusholme	7th Oct.	10th Oct.	None	Good
87	M	7	Moss Side East	9th Oct.	10th Oct.	None	Good
88	M	31	St. Luke's	9th Oct.	10th Oct.	—	Massage treatment in hospital
89	M	3	Gorton South	6th Oct.	10th Oct.	None	Good
90	F	1½	Wythenshawe	6th Oct.	12th Oct.	Right leg	Yielding to treatment
91	M	8½	Withington	?	30th Sept.	—	Outside Authority
92	F	18	„	26th Sept.	15th Oct.	None	Good
93	F	9½	Beswick	24th Sept.	14th Oct.	Left leg	Yielding to treatment
94	F	12	Chorlton-cum-Hardy ..	11th Oct.	15th Oct.	Died	—
95	M	5	Bradford	15th Oct.	16th Oct.	None	Good
96	M	32	Chorlton-cum-Hardy ..	16th Oct.	16th Oct.	Died	—
97	F	13	St. Luke's	17th Oct.	17th Oct.	Left leg	Yielding to treatment
98	M	4	Bradford	12th Oct.	13th Oct.	None	Good
99	F	27	„	25th Oct.	25th Oct.	Died	—
100	M	20	Moston	24th Oct.	27th Oct.	None	Good
101	M	3	Levenshulme	21st Oct.	29th Oct.	Left leg	Yielding to treatment
102	M	4	Moss Side West	27th Oct.	30th Oct.	Died	—
103	M	7	Wythenshawe	15th Oct.	24th Oct.	Legs and arms	Yielding to treatment
104	F	7½	Moss Side East	23rd Sept.	1st Nov.	Left arm	Good
105	F	3	Moss Side West	29th Oct.	2nd Nov.	Right leg	Yielding to treatment
106	F	2	Bradford	28th Oct.	1st Nov.	Left cheek	Yielding to treatment
107	F	1½	Wythenshawe	2nd Nov.	3rd Nov.	Left arm	Yielding to treatment
108	F	18	Rusholme	8th Oct.	4th Nov.	None	Good
109	M	6	Bradford	4th Nov.	6th Nov.	Right leg	Yielding to treatment
110	M	3½	St. Mark's	31st Oct.	6th Nov.	None	Good
111	F	2½	Chorlton-cum-Hardy ..	1st Nov.	9th Nov.	Left side, arm, and leg	Yielding to treatment
112	M	2½	Moss Side West	9th Nov.	12th Nov.	Right arm	Yielding to treatment
113	M	3	Wythenshawe	9th Nov.	13th Nov.	None	Good
114	M	9	Gorton South	8th Nov.	13th Nov.	None	Good
115	F	17	Withington	10th Nov.	14th Nov.	Right thigh	Yielding to treatment
116	M	2½	Openshaw	2nd August	4th August	None	Good
117	F	26	Withington	11th Nov.	14th Nov.	—	Massage treatment in hospital
118	M	2½	Gorton South	12th Nov.	17th Nov.	Left arm	Good
119	F	40	Moss Side East	—	15th Nov.	—	Unavailable
120	M	6	Chorlton-cum-Hardy ..	19th Nov.	22nd Nov.	None	Good
121	M	4	Blackley	22nd Nov.	11th Dec.	Right leg	Yielding to treatment
122	F	25	Crumpsall	14th Dec.	14th Dec.	—	Unavailable
123	F	26	Blackley	21st Dec.	25th Dec.	Died	—

The following special report was submitted by the Medical Officer of Health to the Health Committee in February, 1948.

POLIOMYELITIS IN MANCHESTER DURING 1947.

Since poliomyelitis became a notifiable disease in 1911, no large outbreak of the disease affected the City of Manchester until 1947. A number of cases occurred annually, with peak years in 1912—55 notifications ; 1936—30 notifications ; 1939—26 notifications ; and 1941—21 notifications. These figures, it will be observed, are notifications and do not allow for the cases which, after further observation, were found not to be suffering from poliomyelitis ; however, they give a general indication of the years of increased prevalence in the City over the thirty-five years prior to 1947.

Prior to the start of the outbreak in July, there were no conditions in the health of the City which called for special comment. It has been noted that sometimes epidemics of poliomyelitis are preceded by increased prevalence of intestinal infections or influenza, but this did not occur in Manchester.

Course of the Outbreak.

In Manchester, the epidemic period did not begin until the week ending July 19th, that is, some seven weeks after the start of the increased prevalence in the country generally and two weeks after the first cases had occurred in Eccles.

The course of the outbreak has been set out in Table I and Figure I (notifications and confirmed cases).

The following are the statistics of the epidemic :—

POLIOMYELITIS, 1947.									
Total notifications	..	..	..	..	..	..	..	..	221
Total confirmed cases	..	..	..	..	..	..	..	..	123 (1 military case)
						Males	Females	Total	
Paralytic cases	..	..	..			43	47	..	90
Abortive cases	..	..	..			20	13	..	33
Deaths	..	..	..	..	..	6	7	..	13
Case mortality rate	..	..	..	..	..	..	..	..	10·6 per cent.
Incidence rate	..	..	..	..	..	..	..	..	18·4 per 100,000 population
Number of cases seen by Medical Officers of the Health									
Department at request of general practitioners	..	..	..	..	..	..	..	..	100
Number of cases seen by Medical Officers and admitted to Monsall Hospital									
	..	..	..	..	..	..	..	..	49
Number of cases seen by Medical Officers and confirmed									
	..	..	..	..	..	..	..	..	33 (12 abortive)
Number of cases seen by Medical Officers and not confirmed									
	..	..	..	..	..	..	..	..	16

The incidence rate of 18·4 per 100,000 indicates a reasonably severe epidemic when compared with the figures for the country generally. It is now known that the notification rate in England and Wales (*i.e.*, the number of notifications of Poliomyelitis and Polio-encephalitis per 100,000 living, which is, of course, higher than the actual incidence rate) was 18 per 100,000 living. Again for comparison, the reported incidence for the epidemic in the United States during 1946 was 18 per 100,000 population, and this was the worst poliomyelitis year in that country since 1916.

Table II shows an analysis of the cases in certain age groups and Figure II has been drawn to show the numbers of paralytic and abortive cases which occurred from week to week during the epidemic.

Table III illustrates the distribution of the cases in years of age and it can be seen that whilst poliomyelitis attacks young people generally it takes its heaviest toll in the early years of life,

Early in the epidemic period it became apparent that practitioners had difficulty with the early diagnosis of poliomyelitis mainly because of its rarity. Therefore, a letter was sent to practitioners calling attention to the increased prevalence of the disease in the City, and stating that medical officers with experience in the diagnosis of poliomyelitis were available for consultation in doubtful cases. This offer of assistance was readily accepted. One hundred cases were seen in consultation with doctors, and of these 49 were admitted to Monsall Infectious Diseases Hospital. Furthermore, of the 49 admissions, 33 were confirmed in hospital as cases of poliomyelitis; 12 abortive and 21 paralytic. This "screening" of the cases in the home was valuable as it relieved the Infectious Diseases Hospital of a number of patients who would have taken up the attention to some extent of the depleted nursing staff, and as the consultative service became known to practitioners they readily used it as a safeguard against sending doubtful cases into hospitals and, as a result, very few of the City cases found their way into the wards of the Manchester general hospitals.

Geographical Distribution (Table IV.).

The distribution of the cases was mainly in the eastern and southern part of the City whilst the populous northern districts remained relatively lightly affected. The greatest number of cases occurring in the thickly populated working class wards of Gorton (35 persons per acre) and Bradford (31 persons per acre).

On the other hand, the greatest number of deaths occurred in Chorlton-cum-Hardy. In this ward 5 deaths, or 38 per cent. of the total number of deaths, occurred. The housing in this district is good and the residents largely consist of the executive and artisan classes, the number of persons per acre being 24. In all, 10 cases occurred in this ward, ranging over the whole age distribution, and 5 ended fatally. Although no common factor was found between these cases one wonders if a particularly virulent strain of the virus was active in this district.

Environmental Investigations.

In addition to the usual investigations with regard to food, water, milk supplies, etc., special investigations were made regarding the visits of cases to swimming baths prior to their illness, but no significant findings have been obtained. Furthermore, the cases have been studied in relation to the rivers and canals in the City, and in view of the possibility of fly-borne spread, in relation to the sewage works and refuse disposal plants, but no significant results have been obtained. The Department has also carried out an extensive investigation into each case and contacts as part of a national survey being conducted by the Medical Research Council.

In two instances more than one person in the family was affected. The first occurred in two daughters of a local doctor. Both had marked clinical signs and cerebro-spinal fluid changes, but fortunately no paralysis developed in either. In the second instance the elder brother, aged 10 years, was admitted with paresis of the eye muscles, whilst the younger brother, aged seven, suffered an abortive attack.

One point would seem worthy of mention. Early in the outbreak a number of house-flies caught in houses where cases had occurred were found to be infested with an acarine parasite. It would appear that house-flies are often infested with this mite and whilst this parasite may have little to do with the spread of the infection to man it is suggested that it might provide a possible intermediate host in which the virus could survive from one year to another.

Clinically, the main features seen in the patients' homes were neck stiffness, rigidity of the back muscles often causing lordosis, together with severe headache and pyrexia. Bladder distension and varying degrees of flaccid paralysis of limbs were not uncommon. Five cases of facial palsy and two cases of squint with a history of illness of a few days duration were seen. One adult male with a paresis of the right quadriceps femoris exhibited fibrillary twitching of the forearm muscles on both sides and muscular irritability which caused choreiform movements. The case, when seen in consultation presented in general a clinical picture of spasm rather than paralysis.

An impression was gained that the children attacked were generally of a high mental and physical standard, and that the disease most frequently occurred in children in small families. In contrast to other infectious diseases the homes of the poor and the overcrowded households seemed to be relatively lightly affected.

There were 63 males and 60 females attacked, showing an almost equal distribution of the disease between the sexes.

Preventive Measures.

In addition to the general sanitary measures, and advising families in which the infection had occurred of the dangers of spread, certain special measures were adopted :—

- (1) Early in the outbreak cinemas were requested to stop children's matinees. This was based on prevention of droplet spread as many cinemas have community singing and also there is usually much shouting during such performances.
- (2) Requests to the hospitals and authorities concerned resulted in suspension of tonsil and adenoid operations and to a considerable extent other operations on the nose and throat. No restrictions on dental operations were recommended.
- (3) Certain open-air swimming baths and paddling pools were drained as the chlorination was not satisfactory. Public swimming baths were allowed to remain open but chlorination was increased from the customary 0·2 parts per million free chlorine to 0·4 parts per million free chlorine. However, as a result of the press publicity the attendances at the public baths fell off considerably and so reduced the hot weather tendency to overcrowding. Baths Superintendents were warned of the dangers of over fatigue in relation to poliomyelitis. Swimming galas were prohibited.
- (4) Day Nurseries were closely observed and in two instances cases of poliomyelitis occurred in children attending day nurseries. Surveillance similar to that for smallpox was carried out for 21 days, but no secondary cases occurred. Day schools were allowed to reopen after the summer holidays with no untoward results.
- (5) Arrangements were made with the Cleansing Department to renew all damaged pig food bins which might have been providing breeding places for flies. Also, spraying of these bins together with heaps of garbage and manure middens with five per cent. D.D.T. was carried out to prevent, as far as possible, flies breeding in wet refuse.
- (6) As the paralytic form of poliomyelitis often leads to permanent crippling, arrangements were made for every case to be seen by an orthopaedic surgeon as soon as possible after admission to Monsall Hospital in order that appropriate orthopaedic treatment should be instituted without delay.

Although many aspects of poliomyelitis are still a mystery, much good can be done by early diagnosis and skilled treatment. The teamwork in Manchester between the practitioners and the Health Department, together with the skill of the hospital staffs has, in my view, been materially responsible for the comparatively low mortality figure in this outbreak and for the prevention of more extensive disabilities in the paralytic cases.

In especial, I wish to pay tribute to the work of Dr. A. B. Semple on poliomyelitis in the City, who is responsible for the preparation of this report.

TABLE I.
Showing Incidence of Onset of Cases in Weeks.

Week ending	May				June				July				August				September				October				November				December				Totals		
	3	10	17	24	7	14	21	28	5	12	19	26	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13		20	27
Fatal	—	—	—	—	—	—	1	—	—	—	—	—	2	—	—	1	—	1	1	—	1	2	1	1	1	1	—	—	—	—	—	—	—	1	13
Paralytic	1	—	—	—	1	—	—	—	1	—	—	2	2	2	4	8	3	6	8	5	8	6	5	—	1	4	2	6	2	—	—	—	—	—	77
Abortive	—	—	—	—	—	—	—	—	—	1	—	—	4	2	1	3	2	2	3	3	2	1	3	3	1	—	1	—	—	—	—	1	—	—	33
Totals	1	—	—	—	1	—	1	—	—	2	—	2	8	4	5	12	5	9	11	8	11	9	9	4	3	5	3	6	2	—	—	1	—	1	123

TABLE II.
Cases in Age and Sex Groups.

Under 5 years					5 to 14 years					15—24 years					25 years and over				
Notified cases	Con-firmed	Para-lytic	Abor-tive	Deaths	Notified cases	Con-firmed	Para-lytic	Abor-tive	Deaths	Notified cases	Con-firmed	Para-lytic	Abor-tive	Deaths	Notified cases	Con-firmed	Para-lytic	Abor-tive	Deaths
M. 47 ..	27	23	4	3	M. 38 ..	20	9	11	—	M. 13 ..	10	5	5	1	M. 11 ..	6	6	—	2
F. 35 ..	25	23	2	1	F. 32 ..	13	9	4	1	F. 16 ..	10	7	3	3	F. 29 ..	12	8	4	2
T. 82 ..	52	46	6	4	T. 70 ..	33	18	15	1	T. 29 ..	20	12	8	4	T. 40 ..	18	14	4	4

TABLE III.
Ages of confirmed cases of poliomyelitis notified during 1947.

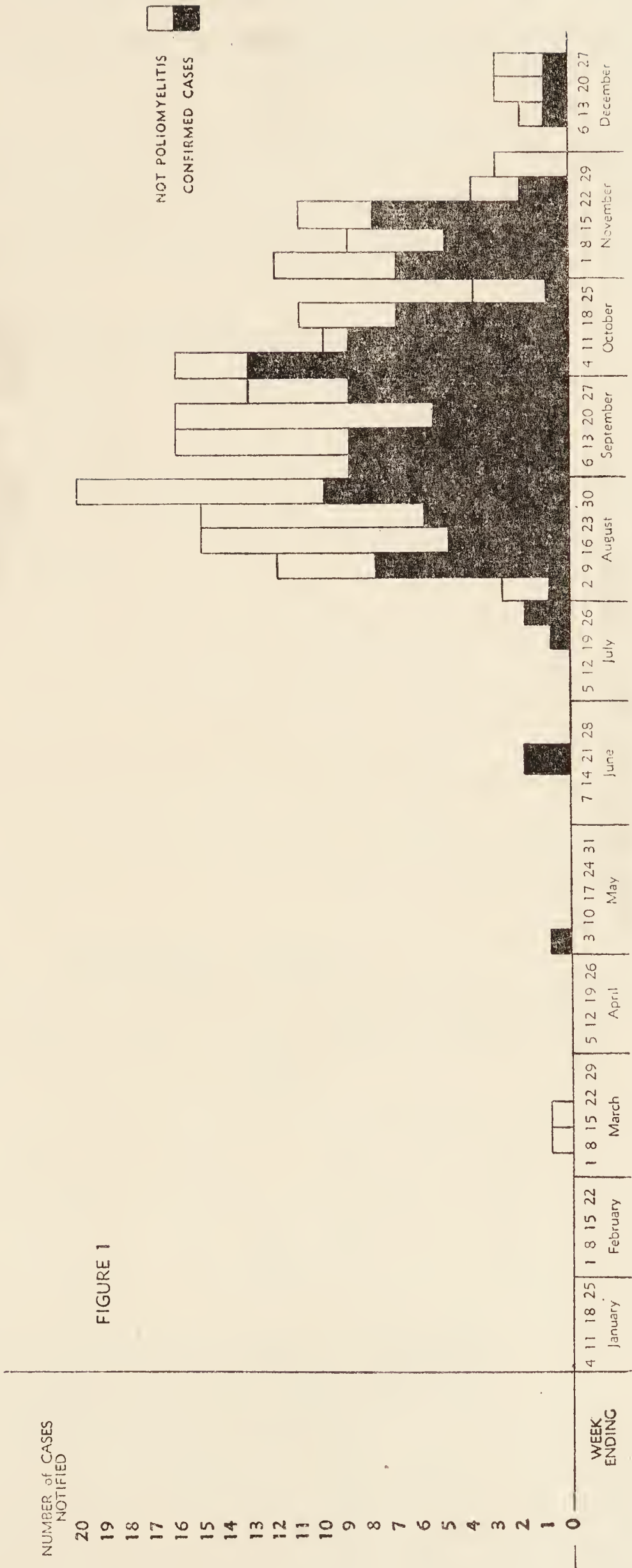
Age in Years	Number of Cases	Age in Years	Number of Cases
0	6	20	2
1	11	21	2
2	15	22	2
3	11	23	2
4	9	24	—
5	5	25	2
6	7	26	5
7	4	27	3
8	2	28	1
9	3	29	—
10	2	30	—
11	3	31	1
12	3	32	2
13	4	33	—
14	—	34	1
15	4	35	1
16	2	36	—
17	2	37	—
18	3	38	—
19	1	39	1
		40	1

TABLE IV.
Table showing Wards Affected.

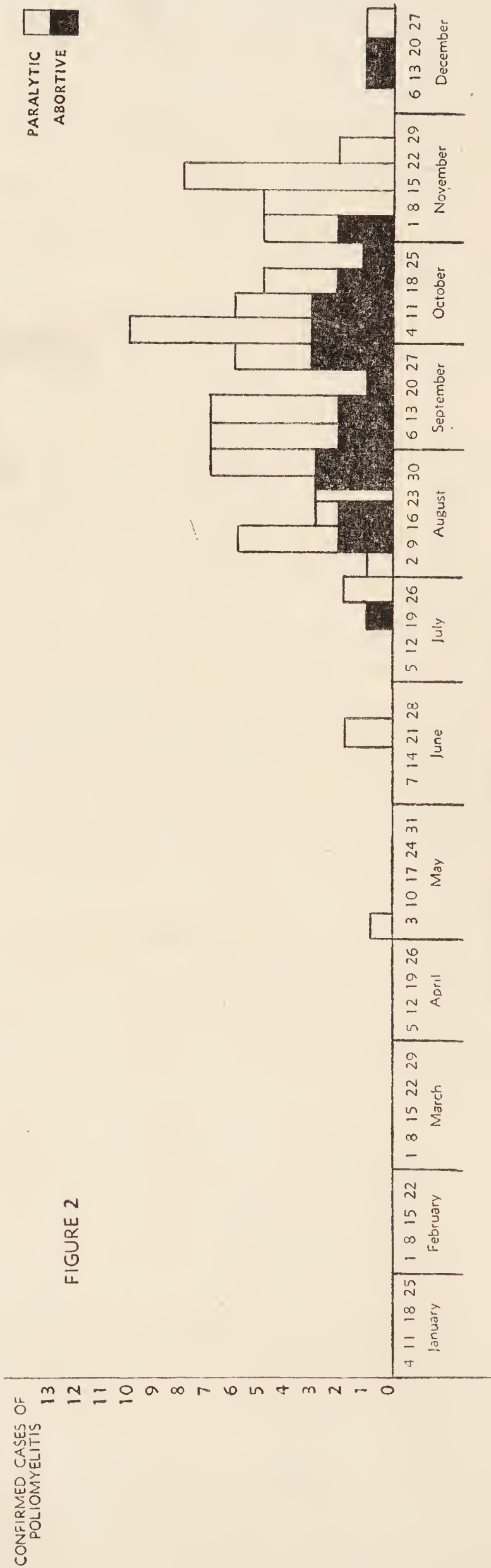
Ward	Notifications		Confirmed Cases		Paralytic		Abortive		Deaths	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
All Saints	4	1	3	—	2	—	1	—	—	—
Ardwick	1	6	—	1	—	1	—	—	—	—
Beswick	2	4	—	2	—	2	—	—	—	—
Blackley	4	2	1	1	1	1	—	—	—	1
Bradford	8	7	5	3	2	3	3	—	—	1
Cheetham	3	2	2	—	2	—	—	—	—	—
Chorlton-cum-Hardy ..	6	7	4	6	4	4	—	2	2	3
Collegiate Church ..	1	2	1	—	—	—	1	—	—	—
Collyhurst	1	2	—	1	—	1	—	—	—	—
Crumpsall	2	5	1	4	1	3	—	1	—	—
Didsbury	6	3	4	2	2	2	2	—	1	—
Exchange	—	—	—	—	—	—	—	—	—	—
Gorton North	7	3	2	1	2	1	—	—	1	—
Gorton South	9	5	5	2	4	2	1	—	1	—
Harpurhey	1	2	1	1	—	—	1	1	—	—
Levenshulme	3	3	2	3	2	3	—	—	—	—
Longsight	2	3	1	2	—	—	1	2	—	—
Medloek Street	2	1	1	—	1	—	—	—	—	—
Miles Platting	1	2	—	1	—	—	—	1	—	—
Moston	2	2	1	1	—	1	1	—	—	—
Moss Side East	2	4	1	—	1	2	—	—	—	—
Moss Side West	5	2	5	2	3	1	2	—	1	—
New Cross	2	—	1	1	1	—	—	—	—	—
Newton Heath	2	3	2	—	2	—	—	—	—	—
Openshaw	4	3	3	—	3	1	—	—	—	—
Oxford	—	2	—	1	—	—	—	—	—	—
Rusholme	6	5	4	—	—	5	4	—	—	1
St. Ann's	—	—	—	5	—	—	—	—	—	—
St. Clement's	—	—	—	—	—	—	—	—	—	—
St. George's	5	4	1	—	1	1	—	—	—	—
St. John's	—	—	—	1	—	—	—	—	—	—
St. Luke's	5	4	2	—	2	2	—	1	—	—
St. Mark's	6	4	4	3	3	2	1	—	—	—
St. Michael's	—	1	—	2	—	—	—	—	—	—
Withington	2	9	2	—	2	4	—	2	—	1
Wythenshawe	5	9	4	6	2	5	2	3	—	—
				8						
Totals	109	112	63	60	43	47	20	13	6	7

— POLIOMYELITIS 1947. —

SHOWING MONTHLY NOTIFICATIONS AND CONFIRMED CASES.



— **POLIOMYELITIS 1947.** —
 SHOWING NUMBER OF PARALYTIC AND ABORTIVE CASES.



ENCEPHALITIS LETHARGICA.

One new case of acute encephalitis lethargica was notified and accepted in 1947.

11 deaths were registered in which chronic encephalitis lethargica was declared to be a contributory cause. For the most part these occurred amongst persons who had not previously been notified as suffering from the disease.

MEASLES AND GERMAN MEASLES.

Cases notified	1947				
	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
MEASLES—					
By Doctors	6,612	700	228	114	7,653
„ Others	949	306	76	23	1,355
Total	7,561	1,006	304	137	9,008
GERMAN MEASLES—					
By Doctors	159	626	234	133	1,152
„ Others	14	53	26	2	95
Total	173	679	260	135	1,247

WHOOPING COUGH.

Whooping Cough became compulsorily notifiable in October, 1939. Before this date the source of notification was solely from the schools.

Whooping cough notifications during 1947 :—

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
1947	560	738	692	318	2,308

Incidence of Whooping Cough in Manchester
at Age Periods 0—5 and 5 Years and over.

Disease	Under 5 years	5 years and over	Total
Whooping Cough	1,348	960	2,308

MALARIA.

One notification was received and accepted, in a Serviceman infected abroad.

ANTHRAX.

No case of anthrax came to the notice of the Department.

DYSENTERY.

79 notifications of dysentery were received, of which 41 were confirmed as relating to true cases; no deaths occurred.

Of the 41 cases, 30 proved to be associated with the presence of bacilli of the Sonne type, 6 with other specific organisms, and the remainder were diagnosed on clinical grounds alone.

PNEUMONIA.

Acute primary and influenzal pneumonia are notifiable, though many cases are only revealed through the death returns.

The following notifications of pneumonia were received: --

Primary Pneumonia	Lobar 488			
	Lobular 169			
	Unclassified 64			
Influenzal Pneumonia	..	..	..	49
				770

There were 452 deaths consisting of 142 lobar, 287 lobular, 23 unclassified, and 19 influenzal. Of these totals 379, consisting of 109 lobar, 240 lobular, 17 unclassified, and 13 influenzal were brought to the notice of the department through the death returns.

Thus the total number of known pneumonia cases for the year was 1,149.

Total primary notified	..	..	..	721
Total primary per death returns	..	..		366
Total primary				1,087
Total influenzal notified	..	..	..	49
Total influenzal per death returns	..	..		13
				1,149

Primary Pneumonia.

Of the 1,087 cases of primary pneumonia 597 were classified as lobar, 409 as lobular and 81 simply as pneumonia. The number of cases investigated by the Health Visitors was 1,015.

Influenzal Pneumonia.

49 cases of influenzal pneumonia were notified and 13 discovered through the death returns, a total of 62 cases.

Of all the cases of pneumonia known to the department 564 were transferred to hospital and of those nursed at home, 15 were attended by nurses supplied by the Manchester and Salford District Nursing Institution.

**BACTERIOLOGICAL EXAMINATIONS MADE FOR THE CITY OF
MANCHESTER DURING 1947 BY THE PUBLIC HEALTH LABORATORY,
UNIVERSITY OF MANCHESTER.**

Month	Diphtheria		Typhoid	Tuberculosis				Water	
				Sputum		Milk		Bacterio- logical	Chemical
	Total	+	Total	Total	+	Total	+	Total	Total
January	325	16	10	114	10	124	12	5	5
February	274	10	2	151	19	46	4	3	3
March	237	6	7	90	8	39	—	3	3
April	283	12	28	105	10	—	—	6	1
May	536	4	3	102	9	—	—	12	6
June	478	25	8	62	7	3	—	20	6
July	359	5	10	89	14	3	—	5	5
August	337	4	4	95	10	5	—	18	1
September	338	3	3	31	6	3	—	10	5
October	298	1	4	78	6	40	6	9	5
November	330	19	3	58	10	44	6	4	—
December	437	25	5	68	10	39	6	4	4
Total	4,232	130	87	1,043	119	346	34	99	44

Total specimens enumerated above, 5,851. Other investigations, 1,913, as under :—

Milks—Coli, etc.	830
,, Chemical examinations	12
,, Mastitis	13
,, Meth. blue, etc.	320
Diphtheria—Virulence tests	49
Swabs—For haemolytic streptococci	228
,, Vincent's angina	24
Inoculation tests	33
Cerebro-spinal fluid, various tests	17
Cultivation tests	62
Ice cream and food	83
Blood, Paul Bunnell test	130
Food poisoning	10
Faeces and urine, for typhoid, dysentery, etc.	100
Autogenous vaccines	2
	<u>1,913</u>

TUBERCULOSIS.

By Dr. D. P. Sutherland, Senior Tuberculosis Officer.

STAFF.

Full time—

D. P. Sutherland, M.B., B.S. (Lond.)	.. .. .	Senior Tuberculosis Officer.
W. Lee, M.B., CH.B.	.. .. .	First Assistant Tuberculosis Officer.
R. Walshaw, M.B., CH.B., D.P.H.	.. .. .	Assistant Tuberculosis Officer and Assistant Medical Officer for Mass Radiography.
H. L. Ackerman, M.R.C.S., L.R.C.P., D.P.H., T.D.D.	.. .. .	Assistant Tuberculosis Officer.
H. B. Slater, M.B., CH.B., M.R.C.S., L.R.C.P.	.. .. .	Assistant Tuberculosis Officer.
W. L. Anderson, M.B., CH.B.	.. .. .	Assistant Tuberculosis Officer.
C. Anderton	.. .. .	Senior Administrative Assistant.
Inspectors	.. .. .	2
Nurses	.. .. .	14
Radiographers (3), pharmacist (1), clerks, etc.	(31) ..	35

It is satisfactory to note that in the year 1947 the new cases of Pulmonary Tuberculosis notified were less than in the previous year, being 859 as compared with 885 in 1946.

The Non-Pulmonary cases notified were 147 as compared with 189 in the previous year.

With regard to deaths, those from Pulmonary Tuberculosis numbered 450 as compared with 460 in 1946.

The Non-Pulmonary deaths totalled 64 as compared with 67 in 1946.

In all these groups new low record figures are recorded for Manchester.

Notification.

Pulmonary Tuberculosis.

It is to be noted that although the incidence of new cases generally is lower than in 1946, there are two age groups in which significant increases occur.

From 15-19 years the male incidence was increased by 27 cases. In the same age group the female increase was 15 cases, but there was also an increase of 18 cases in the 5-14 age group.

As already pointed out, however, these increases are more than compensated for by the overall decrease in cases occurring in the other age groups.

Non-Pulmonary Tuberculosis.

In this group there is a decrease in the total number of new cases. The figures are 71 in 1947 as against 104 in 1946 for males, and 76 as against 85 for females, the chief reduction being amongst the males.

Mortality.

Pulmonary Tuberculosis.

There has been a diminution of 7 in the male deaths and 3 in the female deaths.

Non-Pulmonary Tuberculosis.

There were 10 more deaths amongst males and 13 less amongst females,

Maintenance Allowances under Memorandum 266/T.

Memorandum 266/T was introduced originally as a war-time measure, but it is still in being and is regarded as an integral part of the Tuberculosis Service.

During this year 746 patients were granted allowances which, in total, amounted to £29,108.

The Ministry of Health recognises the unique position of the tuberculous patient, and his or her immediate family, and the necessity for an adequate standard of living in the interest of both the patient and the general public health. Due regard will be paid to this when the new scheme of Social Service is started and a higher level of benefit will probably be provided for the tuberculous patient. Heretofore the chronic case has not been eligible for allowances but this anomaly should be rectified.

It must be emphasised that any special provisions for the tuberculous should be conditional on the patient accepting the treatment offered to him to enable him to recover.

Rehabilitation.

In the report for 1945 attention was directed to the plans for rehabilitation and the measures to be adopted by the Government to implement recommendations which have been made from 1913 onwards.

A meeting with the District Rehabilitation Officers of the Ministry of Labour was held at the Tuberculosis Clinic and the full scheme of treatment, prevention, follow up and care work was explained to them. They were also taken to the Baguley Sanatorium and shown the practical application of graded work (in the special workshops) which is associated with and follows the remedial measures carried out there.

A scheme was inaugurated in co-operation with the Ministry whereby a specially detailed report, Form D.P.1 (X) was to be completed for the Ministry by the Tuberculosis Officer in respect of tuberculous patients who might be rehabilitated in industry, provided work suitable to their physical condition could be secured.

At the time of writing (July, 1948) 426 such reports have been sent to the Ministry and, according to their returns, 146 patients were placed in employment fitted to their physical capacity and are, so far as is known, still so employed at present, with the exception of 7 cases.

The knowledge gained is being usefully applied in the placing of our patients and following arrangements made with the Ministry of Labour, personal interviews take place at the Tuberculosis Clinic, where the medical advice of the Tuberculosis Officer is allied with the practical experience of facilities and available jobs possessed by the District Rehabilitation Officers.

It is intended at a later date that the Ministry of Labour shall establish special factories where patients unsuited to general industry may be employed with safety.

The calls on the Care Committee's fund amount to £800 per annum and it still serves a very useful purpose in meeting demands which are not covered by any other source.

Attendances at the Clinic.

The total number of attendances at the clinic was 34,514, an increase of 1,066 over the figures for 1946.

Examinations carried out for Medical Board Purposes.

The continuing recruitment for the Forces, though diminished in volume, still adds materially to the work of the medical staff. The following table shows the extent to which the Ministry of Labour has used the facilities at the Clinic for obtaining expert opinion on the suitability of those called up in connection with service in His Majesty's Forces.

(1) Year	(2) Number reported upon	(3) Without a previous record at Tuberculosis Clinic	(4) X-ray Examinations of (3)	(5) Total X-ray Examinations	(6) Diagnosis	
					Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis
1939	11	5	5	5	—	—
1940	340	212	182	188	7	—
1941	444	243	236	337	10	1
1942	406	244	240	349	4	—
1943	419	273	272	384	5	1
1944	323	221	219	288	3	—
1945	271	201	200	255	3	1
1946	183	113	112	164	—	—
1947	156	70	69	113	—	—
Totals ..	2,553	1,582	1,535	2,083	32	3

Mass Miniature Radiography .

The mobile unit which has now been in operation since 1945 has during the year pursued the policy, necessitated by the absence of a fixed centre, of conducting all its examinations at various workplaces and public offices where adequate facilities have been available for the purpose. The difficulties in securing satisfactory accommodation do not diminish, but have tended to become more acute as firms find it progressively more difficult to allocate space for the purpose, more especially in view of the present economic situation with the drive for increased production and the restriction on building. In several instances surveys have of necessity had to be postponed indefinitely on these grounds, despite the active interest which many concerns have shown. Where arrangements have been practicable the co-operation of both managements and staffs has been as readily forthcoming as in the past.

A second unit has been operating at the Clinic since August and during the subsequent five months 2,841 X-ray examinations have been carried out. Included in this figure are examinations of 38 intending emigrants to Canada.

A summary of the findings at the examinations carried out by the mobile unit is appended:—

	Males	Females	Total
Total radiographed	10,562	4,895	15,457
Total passed on miniature film	9,776	4,720	14,496 = 93.78 per cent.
Total recalled for full-size film	786	175	961 = 6.22 per cent.
Total recalled for clinical examination..	387	79	466 = 3.01 per cent.

Those who were passed on the miniature film required no further action. The 961 who were recalled for a full size film were those whose miniature film suggested some abnormality which was considered to require further investigation. An analysis of these is given in the following table.

Mass Miniature Radiography—Manchester, 1947.

Ministry of Health Classification Number	Title	Classified on miniature (35 m.m.) films (No further action)			Recalls for full-size film						Totals
		Males	Females	Total	Not followed by recall for clinical examination or interview (No further action)			Followed by recall for clinical examination and interview (Analysis appended)			
					Males	Females	Total	Males	Females	Total	
1	Congenital abnormalities of bony thorax and lungs	26	16	42	5	5	10	4	—	4	56
2	Chronic bronchitis and emphysema	—	—	—	1	—	1	24	1	25	26
3	Pneumonia, lobar	—	—	—	—	—	—	—	—	—	—
4	Broncho-pneumonia (non-tuberculous) (including primary atypical)	—	—	—	—	—	—	—	—	—	—
5	Consolidation of unknown origin	—	—	—	—	—	—	2	2	2	2
6	Bronchiectasis	—	—	—	—	—	—	17	1	19	19
7	Pulmonary fibrosis (non-tuberculous, e.g., post-pneumonic)	—	1	1	2	—	2	1	—	1	4
8	Pneumokoniosis (Silicosis, asbestosis, coalminer's pneumokoniosis)	—	—	—	—	—	—	8	—	8	8
9	Pneumokoniosis accompanied by Tuberculosis	—	—	—	—	—	—	1	—	1	1
10	Basal fibrosis (e.g., obliterated costo-phrenic angle and diaphragmatic tenting	9	—	9	—	—	—	—	—	—	9
11	Pleural thickening	119	10	129	51	2	53	17	1	18	200
12	Pleural and interlobar effusion (non-tuberculous)	—	—	—	—	—	—	—	—	—	—
13	Spontaneous pneumothorax (non-tuberculous)	—	—	—	—	—	—	1	—	1	1
14	Intrathoracic new growth (Mediastinal, pulmonary, bronchial, and pleural, primary and secondary, both benign and malignant)	—	—	—	—	—	—	19	1	20	20
15	Cardio-vascular lesions—congenital	—	—	—	—	—	—	1	—	1	1
16	Cardio-vascular lesions—acquired	—	—	—	—	—	—	46	15	61	61
17	Miscellaneous (including acquired conditions of ribs, abnormalities of the diaphragm, dextrocardia, dextrocardia with transposition of viscera, pulmonary mycosis, mediastinal effusions)	3	—	3	8	2	10	15	1	16	29
18	Missing repeat 35 m.m. films	1	3	4	22	6	28	—	—	—	4
19	Missing large films, i.e., failed to attend	—	—	—	—	—	—	—	—	—	28
20	Tuberculosis, active primary lesions, including epi-tuberculosis :— (a) With symptoms (b) Without symptoms	—	—	—	—	—	—	—	—	—	—
21	Tuberculosis—inactive primary lesions (e.g., Ghon's focus and/or calcified gland	—	—	—	—	—	—	1	—	1	1
22	Tuberculosis—active, post-primary, unilateral :— (a) With symptoms .. {Previously known Newly discovered (b) Without symptoms .. {Previously known Newly discovered	76	29	105	25	8	33	1	1	2	140
23	Tuberculosis—active, post-primary, bilateral :— (a) With symptoms .. {Previously known Newly discovered (b) Without symptoms .. {Previously known Newly discovered	—	—	—	—	—	—	2	—	2	2
		—	—	—	—	—	—	13	5	18	18
		—	—	—	—	—	—	—	2	3	3
24	Tuberculosis—inactive, post-primary :— (a) Previously known cases (b) Previously unknown cases	—	—	—	—	—	—	2	—	2	2
		—	—	—	—	—	—	14	1	15	15
		—	—	—	—	—	—	—	1	2	2
25	Tuberculosis—doubtfully active—still under observation	—	—	—	—	—	—	10	1	11	11
26	Tuberculosis—pleural effusion	—	2	6	96	20	116	87	15	102	224
30	Tuberculosis—spontaneous pneumothorax and hydropneumothorax	—	—	—	—	—	—	78	21	99	99
—	Abscess of lung	—	—	—	—	—	—	—	—	—	—
—	Passed as "Normal"	9,538	4,659	14,197	189	53	242	12	10	22	14,461
—	Failed to attend for clinical interview	—	—	—	—	—	—	9	1	10	10
	Totals	9,776	4,720	14,496	399	96	495	387	79	466	15,457

Comments on cases arising in 1947.

An analysis of the 257 cases of pulmonary tuberculosis recalled for clinical examination and interview by the Radiography Unit Medical Officer shows that :—

- (a) In 43 instances ($= \cdot 28$ per cent. of all examinations) the disease was regarded as active, 4 being previously known cases.

The remaining 39 ($= \cdot 27$ per cent. of all examinations) were newly discovered cases, of whom 38 were advised to attend their private medical practitioners with a view to reference to the appropriate Tuberculosis authority. With the consent of the person concerned, a special letter was sent in every instance to the practitioner, giving particulars of the clinical and radiological findings, and asking that the case be referred. Only one of the 39 was unwilling for this, and in consequence, no further action could be taken.

Of the 38 so advised, 28 attended at the Tuberculosis Clinics, 25 being recommended for institutional treatment. 22 availed themselves of this recommendation, but 3 declined and were, therefore, placed under supervision at the Clinics. Three were not considered to require institutional care and were advised to keep under supervision at the Clinics. The remaining 10 failed to avail themselves of the advice in regard to attendance at the Tuberculosis Clinics.

In every such instance an attempt is made to secure the individual's compliance by means of a subsequent special communication from the Tuberculosis Officer to the medical practitioner reminding him of the case and offering, if the practitioner so wishes, directly to get in touch with the person concerned. Any further action depends upon the reply received, as any attempt at coercing the public would be resented and would be contrary to the voluntary basis upon which the Mass Miniature Radiography Scheme is established.

Sputum was positive for tubercle bacilli in 15 instances, all of whom attended at Tuberculosis Clinics. 14 were recommended for treatment in sanatorium, of whom 11 accepted but 3 declined, and were, therefore, placed under supervision at the Clinics. One was not considered to require institutional care, and was advised to keep under supervision at the Clinic.

- (b) In 115 instances ($= \cdot 74$ per cent. of all examinations) the disease was regarded as inactive, 11 being previously known cases. 35 were regarded as inactive after the initial clinical examination by the Unit Medical Officer, and 66 ($= \cdot 43$ per cent. of all examinations) following further observation at the Tuberculosis Clinics. The remaining 14 failed to avail themselves of the advice given relative to their attendance for observation. The method adopted to secure their attendance is precisely as that outlined in (a) above.
- (c) In 99 instances the activity of the disease was regarded as being doubtful and attendance at the Tuberculosis Clinics for observation was advised in the manner previously mentioned. In all such instances decisions will be notified to the Radiography Unit by the Tuberculosis Officers as, and when, they are made.

In the cases of other various diseases and abnormalities where, after the initial clinical examination by the Unit Medical Officer, treatment was considered to be indicated, the individual was advised to consult his private medical practitioner to whom was sent, with the patient's consent, a full report on the clinical and radiological findings.

Housing.

The department continues its activities in making special enquiries into the housing conditions of families in which tuberculosis has occurred with a view to securing improved accommodation by removal to Corporation houses. Careful consideration is given to the home circumstances in relation both to the suitability of the conditions under which the patient is living and the possibility of family infection.

Well over 1,000 detailed housing reports have been made, each of which has received careful scrutiny to decide whether the family should be recommended for special preference in securing Corporation tenancy. 395 such special recommendations have been made and 243 of these have secured Corporation houses. Of the remaining 152 families, in 71 instances they were successful in obtaining other suitable alternative accommodation themselves, and the balance of 81 families is accounted for by removals out of the Manchester area, etc.

With the present shortage of material and labour it is not to be expected that patients can be rehoused by the Corporation with the same facility as in normal years but it is pleasing to record that, so far as circumstances permit, the Housing Department give a high degree of priority to families recommended for it on the grounds of tuberculosis.

The statistics for the year are set out in the following tables:—

TABLE 1.

Comparative Figures.

Rates per Thousand of the Population.

	1934- 38 (Mean rate)	1939	1940	1941	1942	1943	1944	1945	1946	1947
DEATH RATES—										
General	13.27	13.39	17.98	16.64	14.72	15.50	14.20	14.41	13.52	13.79
All respiratory diseases (except tuberculosis) ..	1.69	1.30	4.00	2.81	2.13	2.64	2.04	2.33	2.09	2.11
Tuberculosis (all forms) ..	1.07	1.00	1.24	1.32	1.12	1.07	0.91	0.93	0.79	0.75
Phthisis, both sexes	0.93	0.86	1.09	1.39	0.99	0.91	0.80	0.80	0.69	0.66
„ males only	1.19	1.10	1.43	1.45	1.23	1.14	0.95	1.00	0.92	0.88
„ females only	0.69	0.64	0.78	0.84	0.76	0.71	0.66	0.62	0.48	0.46
Non-pulmonary tuber- culosis (both sexes) ..	0.15	0.14	0.15	0.19	0.13	0.16	0.11	0.13	0.10	0.09
TUBERCULOSIS NOTIFICATION RATES—										
All forms	1.79	1.71	2.04	2.17	1.99	2.08	1.88	1.93	1.60	1.47
Pulmonary only	1.36	1.30	1.63	1.72	1.57	1.60	1.50	1.57	1.32	1.25
Non-pulmonary only ..	0.43	0.41	0.42	0.45	0.42	0.48	0.38	0.36	0.28	0.22

TABLE 2.

New Cases and Deaths during 1947.

Age Periods	New Cases				Deaths			
	Pulmonary		Non-Pulmonary		Pulmonary		Non-Pulmonary	
	M.	F.	M.	F.	M.	F.	M.	F.
0 —	3	3	—	2	2	2	2	4
1 —	14	13	11	8	2	3	7	7
5 —	25	37	22	17	1	—	5	4
15 —	279	258	30	38	107	129	15	10
45 —	158	36	5	8	149	27	4	2
65 — and upwards ..	25	8	3	3	22	6	3	1
Totals ..	504	355	71	76	283	167	36	28

The number of non-notified deaths from pulmonary tuberculosis was $23=5.11$ per cent.

The number of non-notified deaths from non-pulmonary tuberculosis was $10=15.63$ per cent., but it is to be noted that 4 of the 10 cases were certified as cases of tubercular meningitis. These cases as a rule have a very short illness and diagnosis is frequently in doubt during life.

The percentage of non-notified deaths from all forms of tuberculosis was 6.42.

There were, in addition, 10 deaths of non-notified cases outside Manchester which were adjudged by the Registrar-General to be properly referable to this area.

TABLE 3.

Primary Notifications and Deaths from Pulmonary Tuberculosis, 1917-1947.

(Manchester figures—52 weeks)

Age Groups.

Pulmonary Tuberculosis	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	Total	
												Notifications	Deaths
Notifications, 1917—1937 Deaths, " "	80 65	549 216	1436 156	1498 315	3087 1639	3562 2132	5834 3505	5401 3797	4532 3808	2377 2116	807 774	29162	18523
Notifications, 1938 Deaths, "	6 1	8 3	27 2	30 7	116 46	146 78	192 128	152 95	150 114	104 104	32 30	947	620
Notifications, 1939 Deaths, "	3 1	8 2	19 —	22 4	125 53	132 73	174 131	169 98	134 126	101 101	41 35	910	598
Notifications, 1940 Deaths "	5 2	5 2	14 1	21 5	145 64	136 56	216 144	171 149	116 100	98 91	45 53	1012	685
Notifications, 1941 Deaths, "	3 —	15 5	10 4	30 4	148 63	136 67	206 125	163 117	156 118	116 131	45 65	1036	702
Notifications, 1942 Deaths, "	1 —	5 1	17 6	18 3	130 41	150 68	202 119	173 111	164 121	109 101	32 42	946	596
Notifications, 1943 Deaths, "	1 1	11 1	10 —	21 4	129 41	157 57	208 92	169 106	109 104	102 102	34 35	957	547
Notifications, 1944 Deaths, "	2 —	18 3	18 2	27 2	117 34	139 59	191 95	140 89	115 108	102 77	45 35	922	495
Notifications, 1945 Deaths "	3 3	20 2	10 2	27 6	119 31	174 60	206 96	158 68	123 99	94 81	38 51	982	495
Notifications, 1946 Deaths, "	6 4	12 —	24 2	21 1	79 23	165 52	216 87	125 69	133 95	71 77	35 48	885	459
Notifications, 1947 Deaths, "	6 3	27 5	33 0	29 1	121 21	143 40	170 96	103 77	118 97	76 78	33 30	859	448
Total notifications Total deaths	116 80	678 240	1618 175	1744 352	4315 2056	5040 2742	7815 4618	6924 4776	5831 4872	3350 3059	1187 1198	38618	24168

TABLE 4.
Primary Notifications and Deaths from Non-Pulmonary Tuberculosis, 1917-1947.
(Manchester figures—52 weeks)
Age Groups.

Non-pulmonary Tuberculosis	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	TOTAL	
												Notifications	Deaths
Notifications, 1917—1937	280	1889	2190	1707	1352	807	907	540	382	240	139	10433	
Deaths, " "	338	1063	453	370	403	261	295	234	202	145	99		3870
Notifications, 1938	10	8	51	47	42	27	39	18	15	6	7	303	
Deaths, " "			13	10	8	7	12	7	12	4	7		105
Notifications, 1939	4	3	40	34	46	29	36	23	15	10	6	289	
Deaths, " "			9	7	14	12	9	6	5	8	6		103
Notifications, 1940	3	4	47	30	42	27	31	18	17	10	6	260	
Deaths, " "			9	2	10	7	9	5	10	4	6		83
Notifications, 1941	3	3	40	34	40	24	45	21	11	2	6	273	
Deaths, " "			9	8	14	9	13	10	8	7	3		119
Notifications, 1942	2	4	35	27	42	29	33	24	16	8	3	255	
Deaths, " "			5	7	9	10	10	3	1	6	6		75
Notifications, 1943	4	3	36	34	44	36	51	18	18	8	7	292	
Deaths, " "			2	12	12	5	12	7	6	6	1		88
Notifications, 1944	3	4	32	15	32	36	34	25	9	12	3	235	
Deaths, " "			7	5	7	5	3	6	8	4	2		64
Notifications, 1945	6	4	36	33	29	20	30	20	11	5	3	224	
Deaths, " "			6	8	5	6	7	8	5	3	5		79
Notifications, 1946	7	8	24	23	25	21	27	12	8	5	6	189	
Deaths, " "			5	4	4	8	8	3	8	2	1		65
Notifications, 1947	2	6	22	17	21	17	12	18	5	8	6	147	
Deaths, " "			6	2	8	8	5	5	1	5	2		62
Total notifications	324	2239	2553	2001	1715	1073	1245	737	507	314	192	12900	
Total deaths	385	1225	524	442	494	338	383	294	266	194	138		4713

Table 5.

Primary Notifications of Pulmonary and Non-Pulmonary Tuberculosis
received from Municipal Wards during 1947.

Wards	Estimated Population	Pulmonary	Non- Pulmonary	Totals	Rate per Thousand of Population
1. Exchange	82	—	—	—	0.00
2. New Cross	12,640	22	2	24	1.90
3. St. Clement's	753	1	—	1	1.33
4. Oxford	192	3	—	3	15.63
5. St. John's	1,529	2	—	2	1.31
6. St. Ann's	17	—	—	—	0.00
7. St. Michael's	11,496	19	3	22	1.91
8. Collyhurst	12,283	22	1	23	1.87
9. Cheetham	22,026	20	2	22	1.00
10. Collegiate Church ..	8,121	16	5	21	2.59
11. Crumpsall	24,250	22	3	25	1.03
12. Blackley	28,032	44	6	50	1.78
13. Harpurhey	18,394	15	3	18	0.98
14. Moston	29,118	25	6	31	1.06
15. Newton Heath	20,753	16	2	18	0.87
16. Miles Platting	14,535	20	4	24	1.65
17. Bradford	25,332	40	7	47	1.86
18. Beswick	21,436	19	2	21	0.98
19. Ardwick	17,896	30	5	35	1.96
20. Openshaw	18,398	28	6	34	1.85
21. St. Mark's	19,317	34	3	37	1.92
22. Longsight	25,439	31	4	35	1.38
23. All Saints'	12,832	47	8	55	4.29
24. St. Luke's	20,044	30	4	34	1.70
25. Medlock Street	15,351	26	3	29	1.89
26. St. George's	16,097	25	6	31	1.92
27. Moss Side East	16,608	24	9	33	1.99
28. Moss Side West	19,222	35	3	38	1.98
29. Chorlton-cum-Hardy	41,571	33	9	42	1.01
30. Didsbury	30,868	14	4	18	0.58
31. Withington	49,050	59	9	68	1.39
32. Gorton North	21,767	19	3	22	1.01
33. Gorton South	26,229	34	4	38	1.45
34. Levenshulme	19,597	14	4	18	0.92
35. Rusholme	20,056	24	7	31	1.55
36. Wythenshawe	44,229	45	10	55	1.24
37. Unclassified	—	1	—	1	—
Total—City of Manchester	685,560	859	147	1,006	1.47

NOTE.—In the above table the population figures are not strictly accurate being based on the last census figures (1931). Removals on account of slum clearance, war damage, etc., will have disturbed the balance, but the figures serve to give a general picture of the variation in incidence according to the character of the Ward.

It will be seen that the incidence rate is higher generally in the more congested areas.

TABLE 6.
Sources of Notification of Tuberculosis during 1947.

Source	Pulmonary	Non-Pulmonary	Totals
Crumpsall Hospital	67	7	74
Withington Hospital	45	5	50
Booth Hall Hospital	45	28	73
Monsall Hospital	5	1	6
District Medical Officers	—	—	—
Manchester Royal Infirmary	19	26	45
Ancoats Hospital	26	13	39
Manchester and Salford Skin Hospital	—	5	5
St. Mary's Hospital	1	2	3
Northern Hospital	1	3	4
Victoria Memorial Jewish Hospital	5	1	6
Royal Manchester Children's Hospital, Pendlebury ..	4	8	12
Do. do. do. Gartside St.	—	—	—
Duchess of York Hospital for Babies	5	2	7
Manchester Hospital for Consumption	—	—	—
Mental Hospitals	15	—	15
Schools	—	1	1
Child Welfare Centres	—	—	—
H.M. Forces	53	2	55
Ministry of Pensions	7	3	10
Other Authorities	58	15	73
Private Practitioners	391	15	406
Tuberculosis Staff	104	9	113
Various Sources	8	1	9
Total	859	147	1,006

98 tenants have allowed the removal of bedding, etc., for disinfection or destruction.

41,868 cardboard boxes have been prepared in the office and supplied to patients for use as sputum boxes in the home.

288 sputum bottles have been supplied for use outside the house.

12,124 visits have been made by the Enquiry Officers during the year.

35,859 letters were sent out.

372 notices warning against spitting on floors, etc., have been supplied to offices and workshops.

TABLE 7.

**Sources of Primary Notification of Non-Pulmonary Cases for
the Years 1918 to 1947.**

Source	1918- 1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
Crumpsall Hospital	403	20	19	24	14	17	18	9	6	9	7
Withington Hospital	371	32	22	19	14	20	15	10	7	6	5
Booth Hall Hospital	916	42	37	31	48	34	42	37	35	30	28
District Medical Officers ..	9	1	—	—	—	—	—	—	—	—	—
Manchester Royal Infirmary	1625	38	49	44	51	48	75	49	61	49	26
Ancoats Hospital	777	29	33	11	29	24	23	18	8	12	13
Manchester and Salford Skin Hospital	662	8	20	14	11	7	8	10	7	6	5
St. Mary's Hospital	192	7	3	7	4	2	2	3	2	2	2
Northern Hospital	156	1	4	8	4	4	2	1	2	2	3
Victoria Memorial Jewish Hospital	83	2	1	3	1	1	2	2	2	—	1
Royal Manchester Children's Hospital— Pendlebury	228	9	11	6	13	10	10	9	7	12	8
Gartside Street	593	12	5	9	7	2	8	4	6	2	—
Duchess of York Hospital for Babies	29	2	2	—	2	1	5	3	2	8	2
Mental Hospitals	37	—	1	1	5	2	4	2	—	—	—
Schools	352	4	2	3	2	2	2	—	—	2	1
Child Welfare Centre ..	5	—	—	—	—	1	—	—	—	1	—
H.M. Forces	37	3	1	4	7	8	13	13	8	4	2
Ministry of Pensions ..	—	—	—	—	—	4	3	3	1	2	3
Private Practitioners.. ..	2300	61	47	31	30	33	26	24	27	15	15
Tuberculosis Staff	278	9	7	18	13	12	16	11	14	6	9
Various Sources	577	23	25	27	18	23	18	27	29	21	17
Totals	9630	303	289	260	273	255	292	235	224	189	147

TABLE 8.

* New Cases of Pulmonary Tuberculosis
Notified during the Years 1900 to 1947.

Year						Poor-law Cases	Institutions, etc.	Private Practitioners	Total
(1)	1900	..	..	..	..	578	455	540	1,573
	1901	..	..	..	..	625	373	341	1,339
	1902	..	..	..	..	667	305	303	1,275
	1903	..	..	..	..	556	550	251	1,357
	1904	..	..	..	..	512	440	250	1,202
	1905	..	..	..	..	527	588	291	1,406
	1906	..	..	..	..	565	510	304	1,379
	1907	..	..	..	..	634	646	310	1,590
(2)	1908	..	..	..	..	659	498	346	1,503
	1909	..	..	..	..	681	542	384	1,607
	1910	..	..	..	..	543	760	356	1,659
(3)	1911	..	..	..	..	517	897	423	1,837
(4)	1912	..	..	..	..	488	947	969	2,404
(5)	1913	..	..	..	..	345	717	1,350	2,412
	1914	..	..	..	..	483	877	1,304	2,664
	1915	..	..	..	..	279	740	1,194	2,213
	1916	..	..	..	..	322	817	1,410	2,549
	1917	..	..	..	..	470	716	1,061	2,247
	1918	..	..	..	..	268	563	1,015	1,846
	1919	..	..	..	..	208	538	845	1,591
	1920	..	..	..	..	206	629	672	1,507
	1921	..	..	..	..	257	632	722	1,611
	1922	..	..	..	..	233	567	656	1,456
	1923	..	..	..	..	239	546	659	1,444
	1924	..	..	..	..	223	555	731	1,509
	1925	..	..	..	..	262	496	746	1,504
	1926	..	..	..	..	220	422	765	1,407
	1927	..	..	..	..	241	441	756	1,438
	1928	..	..	..	..	253	361	824	1,438
	1929	..	..	..	..	201	382	802	1,385
	1930	..	..	..	..	201	377	709	1,287
						<i>Transferred Hospitals</i>			
	1931	..	..	..	..	206	362	717	1,285
	1932	..	..	..	..	202	228	657	1,087
	1933	..	..	..	..	205	213	663	1,081
	1934	..	..	..	..	242	197	634	1,073
	1935	..	..	..	..	218	202	586	1,006
	1936	..	..	..	..	208	192	575	975
	1937	..	..	..	..	233	275	547	1,055
	1938	..	..	..	..	249	202	496	947
	1939	..	..	..	..	223	227	460	910
	1940	..	..	..	..	241	275	496	1,012
	1941	..	..	..	..	218	324	494	1,036
	1942	..	..	..	..	179	335	432	946
	1943	..	..	..	..	200	381	376	957
	1944	..	..	..	..	138	408	376	922
	1945	..	..	..	..	129	395	458	982
	1946	..	..	..	..	133	365	387	885
	1947	..	..	..	..	157	311	391	859
Total						15,844	22,779	30,034	68,657

* This table does not include 425 cases notified in 1899.

- (1). Voluntary notification of Pulmonary Tuberculosis—Manchester Scheme.
- (2). Compulsory notification (Tuberculosis Regulations) from Poor Law Institutions.
- (3). Compulsory notification from voluntary institutions.
- (4). Compulsory notification of Pulmonary Tuberculosis by all practitioners.
- (5). Compulsory notification of all forms of Tuberculosis.

TABLE 9.

New Cases of Non-Pulmonary Tuberculosis Notified
during the Years 1913—1947.

Year								Males	Females	Total
1913	..	..	..	..	..	..	..	759	714	1,473
1914	..	..	..	..	..	..	..	519	413	932
1915	..	..	..	..	..	..	..	422	415	837
1916	..	..	..	..	..	..	..	418	467	885
1917	..	..	..	..	..	..	..	433	449	882
1918	..	..	..	..	..	..	..	345	353	698
1919	..	..	..	..	..	..	..	206	228	434
1920	..	..	..	..	..	..	..	280	257	537
1921	..	..	..	..	..	..	..	295	281	576
1922	..	..	..	..	..	..	..	321	284	605
1923	..	..	..	..	..	..	..	350	380	730
1924	..	..	..	..	..	..	..	316	307	623
1925	..	..	..	..	..	..	..	322	300	622
1926	..	..	..	..	..	..	..	239	224	463
1927	..	..	..	..	..	..	..	277	226	503
1928	..	..	..	..	..	..	..	214	276	490
1929	..	..	..	..	..	..	..	204	171	375
1930	..	..	..	..	..	..	..	251	215	466
1931	..	..	..	..	..	..	..	259	237	496
1932	..	..	..	..	..	..	..	201	201	402
1933	..	..	..	..	..	..	..	154	159	313
1934	..	..	..	..	..	..	..	170	143	313
1935	..	..	..	..	..	..	..	146	161	307
1936	..	..	..	..	..	..	..	154	147	301
1937	..	..	..	..	..	..	..	184	192	376
1938	..	..	..	..	..	..	..	154	149	303
1939	..	..	..	..	..	..	..	143	146	289
1940	..	..	..	..	..	..	..	129	131	260
1941	..	..	..	..	..	..	..	135	138	273
1942	..	..	..	..	..	..	..	118	137	255
1943	..	..	..	..	..	..	..	127	165	292
1944	..	..	..	..	..	..	..	110	125	235
1945	..	..	..	..	..	..	..	108	116	224
1946	..	..	..	..	..	..	..	104	85	189
1947	..	..	..	..	..	..	..	71	76	147
Total								8,638	8,468	17,106

TABLE 10.

Tuberculosis (Non-Pulmonary)—Primary Cases Notified during 1947.—Age Groups and Site.

Location of Disease	AGE GROUPS																		Totals			
	0—		5—		10—		15—		20—		25—		35—		45—		55—				65—	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females		
Brain :—Tumour	3	7	4	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Meninges	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Hydrocephalus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Glands :—Cervical	5	2	5	4	3	4	1	4	3	3	—	3	2	3	1	2	—	2	1	—		
Mesenteric	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Axillary	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Inguinal	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—		
Tuberculous Peritonitis	—	—	—	—	1	—	—	2	1	1	—	1	—	—	—	—	—	—	—	—		
Tuberculosis of Abdomen	—	—	—	1	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—		
" of Breast	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—		
" of Intestines	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—		
Joints :—Spine	1	—	—	1	—	—	1	1	2	—	3	2	1	—	—	—	—	1	—	—		
Hip	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—		
Elbow	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Ankle	—	—	—	2	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—		
Wrist	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—		
Shoulder	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Knee	—	—	2	—	2	1	1	—	—	—	—	—	2	—	—	1	—	—	—	—		
Bones :—Various	—	—	—	—	—	—	3	—	—	—	—	—	—	2	—	—	—	—	—	—		
Tuberculosis of Skin	—	—	—	—	—	1	—	—	—	—	—	—	2	—	—	—	—	—	—	—		
General Tuberculosis	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—		
Special Organs :—Ear	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Bladder, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Kidney	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—		
Testicle, etc.	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—		
Muscles, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Rectum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Uterus	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—		
Unclassified	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Totals	11	10	12	10	10	7	9	12	9	8	3	9	9	9	2	3	3	5	3	3	71	76

TABLE 11.—Various Statistics Relating to the Notification of Tuberculosis.

	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1914 to 1933	1899 Sept. 1st to 1913 Dec. 31st	Total
Cases Visited and Registered—																	
Males	609	657	661	632	669	671	793	771	674	716	818	703	738	836	26646	14170	50155
Females	425	464	550	532	599	553	539	541	544	561	630	586	584	598	20559	8854	36694
Totals	1034	1121	1211	1164	1268	1224	1332	1312	1218	1277	1448	1289	1322	1434	47205	23024	86849
Houses Disinfected																	
1. By Corporation—	832	797	982	1223	1321	1395	1582	1837	1983	2107	2180	2361	2608	2866	49980	26373	99595
2. By Tenants—	3985	3077	3584	4834	5275	4374	3571	4170	4283	4473	4583	4864	5108	5614	110838	36919	205567
Totals	4817	3874	4566	6057	6596	5769	5153	6007	6266	6580	6763	7225	7716	8480	160818	63292	305162
Specimens of Sputum examined—																	
Positive	857	723	626	569	548	550	615	649	693	649	683	769	846	1002	10328	6705	25955
Negative	4087	4540	3686	3927	3840	3699	3377	3581	3511	3878	4060	4202	4809	4957	38086	12176	102329
Totals	4944	5263	4312	4496	4388	4249	3992	4230	4204	4527	4743	4971	5655	5959	48414	18881	128284
Cases admitted to hospital and sanatoria	1180	1055	1494	1618	2000	2008	2012	2157	2007	2204	2246	2239	2347	2368	42049	22669	90473
Notified from Common Lodging houses	17	16	18	14	15	14	17	39	25	37	27	36	24	28	1965	3109	5384
Number of cases under observation ..	6462	6839	6680	6470	6316	6136	6421	6736	7034	7140	7558	7951	8271	8650	174662	33702 Approx.	—

TABLE 12.—Return showing the Work of the Clinic during 1947.

Diagnosis	Pulmonary				Non-Pulmonary				Total				Grand Total
	Adults		Children		Adults		Children		Adults		Children		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
A.—New cases examined during the year (excluding contacts)—													
(a) Definitely tuberculous	370	236	25	19	36	35	21	18	406	271	46	37	760
(b) Diagnosis not completed	..	..	..	..	..	..	..	..	126	83	25	22	256
(c) Non-tuberculous	..	..	..	..	..	..	..	..	1027	1035	102	105	2269
B.—Contacts examined during the year—													
(a) Definitely tuberculous	12	25	12	19	..	..	6	1	12	25	18	20	75
(b) Diagnosis not completed	..	..	..	..	..	..	..	..	4	18	34	18	74
(c) Non-tuberculous	..	..	..	..	..	..	..	..	256	492	305	307	1360
C.—Cases written off the Clinic Register as—													
(a) Recovered	50	52	17	11	23	38	30	25	73	90	47	36	246
(b) Non-tuberculous	..	..	..	..	..	..	..	..	1283	1527	407	412	3629
D.—Number of persons on Clinic Register on December 31st—													
(a) Definitely tuberculous	1967	1559	196	181	257	371	240	187	2224	1930	436	368	4958
(b) Diagnosis not completed	..	..	..	..	..	..	..	..	130	101	59	40	330

Cases of tuberculosis who received Treatment from the Clinic

Attendances at the Clinic

X-ray Examinations

364

34,514

5,879

TABLE 13.

Insured Cases Applying for Treatment for the Years 1914-1947.

	Males	Females	Total
1914	730	321	1,051
1915	572	315	887
1916	747	316	1,063
1917	728	359	1,087
1918	642	261	903
1919	630	255	885
1920	645	250	895
1921	615	255	870
1922	543	265	808
1923	539	291	830
1924	597	371	968
1925	610	327	937
1926	562	368	930
1927	555	296	851
1928	612	372	984
1929	610	376	986
1930	551	352	903
1931	555	360	915
1932	451	323	774
1933	503	281	784
1934	471	284	755
1935	428	283	711
1936	483	312	795
1937	507	345	852
1938	466	269	735
1939	413	306	719
1940	493	317	810
1941	521	297	818
1942	475	347	822
1943	482	357	839
1944	426	321	747
1945	489	331	820
1946	431	270	701
1947	446	251	697

Cases of discharged Service personnel referred for treatment—323.

Number of patients who had so far recovered that no signs of active disease were found : Insured—406 ; Uninsured—154.

Grants of food were made in 160 instances to 51 families, and 2 grants of clothing were supplied to 2 patients in hospital and sanatoria to help them to derive full benefit from treatment.

Special visits to the number of 10,189 have been paid by the Tuberculosis Nurses and 1016, visits by the Clinical Nurse who attends to domiciliary patients requiring surgical dressings and nursing care,

TABLE 14.—Insured Cases Treated in 1947.

Residential	1,069
Tuberculosis Clinic	186
Domiciliary	1,752
Total	3,007

Analysis of Cases Treated.

TABLE 15.—Residential (Insured).

INSTITUTION	Total Cases Treated		Discharged from Institutions		Died	* Residential Treatment discontinued in other cases	Still under Residential Treatment on 1st Jan., 1948
	Males	Females	Improved	Without Improvement			
	(1)		(2)	(3)	(4)	(5)	(6)
PULMONARY							
Baguley	319	237	52 57	16 15	58 40	52 28	141 97
Crossley	44	82	14 34	1 4	— —	2 1	27 43
Abergele	95	—	33	10	4	—	48
Barrowmore	40	—	12	1	1	4	22
Withington	64	42	35 25	3 9	18 5	— —	8 3
Crumpsall	36	12	6 6	5 2	21 2	— —	4 2
Total Pulmonary	598	373	274	66	149	87	395
NON-PULMONARY							
Manchester Royal Infirmary	2	2	2 2	— —	— —	— —	— —
Skin Hospital	1	—	1	—	—	—	—
Ancoats Hospital	—	—	—	—	—	—	—
Shropshire Orthopaedic Hospital	30	10	15 6	— —	2 —	— —	13 4
Withington	17	14	12 7	2 6	3 —	— —	— 1
Crumpsall	13	9	3 5	4 3	5 1	— —	1 —
Total Non-Pulmonary	63	35	53	15	11	—	19
TOTAL—ALL FORMS	661	408	327	81	160	87	414

* The figures in column (5) relate to cases as to the progress of which no definite report is available for various reasons—e.g., the withdrawal from the Institution of the insured persons themselves before the expiration of the period for which they were nominated for the treatment.

TABLE 16.—*Residential (Uninsured and Children under 15).*

INSTITUTION	Total Cases Treated			Discharged from Institutions		Died (4)	* Residential Treatment discontinued in other cases (5)	Still under Residential Treatment on 1st Jan., 1948 (6)
	Males	Females (1)	Children	Improved (2)	Without Improve- ment (3)			
PULMONARY								
Baguley	23	52	—	3 13	1 8	7 7	1 7	11 17
Crossley	2	13	—	1 2	— 2	— —	— 2	1 7
Abergele	10	—	183	6 79	— —	1 1	— 1	3 102
Barrowmore	1	—	—	1	—	—	—	—
Withington	19	32	—	6 20	6 5	5 4	— —	2 3
Booth Hall	1	4	52	— 2 30	— 1 4	— — 10	— — —	1 1 8
Crumpsall	17	10	—	— 1	4 3	5 2	— —	8 4
Total Pulmonary ..	73	111	235	164	34	42	11	168
NON-PULMONARY								
Abergele	—	—	101	— 34	— —	— 2	— 1	— 64
Manchester Royal Infirmary	—	1	—	1 —	— —	— —	— —	— —
Shropshire Orthopaedic Hospital	6	4	—	4 3	— —	— —	— —	2 1
Withington	1	6	—	— 4	— 1	1 —	— —	— 1
Booth Hall	3	2	45	1 24	2 6	— 13	— —	— 2
Crumpsall	1	8	—	— 3	— 2	— 2	— —	1 1
Total Non-Pulmonary	11	21	146	74	12	18	1	73
Total—ALL FORMS ..	84	132	381	238	46	60	12	241

* The figures in column (5) relate to cases of which no definite report is available for various reasons—e.g., the withdrawal from the Institution of the persons themselves before the expiration of the period for which they were nominated for the treatment.

Light Therapy.

Artificial light treatment has been continued for those cases that experience has proved benefit by this form of therapy. During the last 18 years 889 cases have been under this treatment. Two forms of artificial sunlight are employed, viz., the mercury vapour lamp and the open arc lamp.

The following table analyses these cases in detail and shows a gain in weight and improvement in many patients. Quiescence was secured in a number of those who completed the necessary course of treatment. It is to be noted that those particularly benefiting are the sufferers from tuberculous adenitis (with or without abscess formation), and those in whom abdominal tuberculosis existed.

It must be borne in mind that no figures of the treatment of Lupus appear, as these cases are treated by the Manchester and Salford Hospital for Skin Diseases (on behalf of the Corporation), and in the majority of instances with very marked benefit. The introduction of treatment by Calciferol has been instrumental in shortening in some cases the length of treatment required. The condition has cleared up after a few months' treatment where formerly it proved intractable for years.

TABLE 17.

Localisation of the Disease	No. of Cases	Sex		Conditions of Cases at the end of Treatment				Weight Record			Average duration of Treat- ment in Months	Treat- ment discon- tinued	Cases still under Treat- ment and not include in table
		M.	F	Quies- cent	Im- proved	Station- ary	Worse	Gain	Station- ary	Loss			
Tuberculous adenitis with abscess	194	81	113	71	39	6	—	94	12	10	13·06	78	5
Tuberculous adenitis without softening ..	527	228	299	186	74	17	6	214	31	38	10·79	244	9
Tuberculosis of bones joints, and spine ..	43	28	15	10	3	2	1	12	—	4	10·37	27	—
Tuberculosis of abdomen and tabes mesenterica	66	22	44	19	10	4	—	26	2	5	9·68	33	1
Tuberculosis of bronchial glands	4	4	—	—	2	—	1	3	—	—	7·00	1	—
Tuberculosis of skin ..	9	3	6	—	2	—	—	1	1	—	2·75	7	1
Tuberculosis of kidney ..	5	2	3	—	1	1	—	1	—	1	12·00	3	—
Pre-tuberculous conditions	19	10	9	6	5	—	—	10	—	1	5·36	8	—
Chest wall	6	4	2	1	—	—	—	—	1	—	8·00	5	—

TABLE 18.

Non-pulmonary cases treated at various Institutions :—

Tuberculosis of :—

Bones and Joints	.. .. .	189
Glands	.. .. .	28
Genito Urinary Tract	.. .. .	8
Abdomen	.. .. .	20
Empyema	.. .. .	3

Skin—

1. Lupus Vulgaris	.. .. .	79
2. Toxi Tuberculids	.. .. .	1
3. Bazins Disease	.. .. .	2
4. Tuberculous Ulceration of Skin	.. .. .	5

TABLE 19.

Tables showing After History of Quiescent and
Arrested Cases (Insured).

1937.

*No Tubercle Bacilli found.**Tubercle Bacilli found.*

Stage	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1947	Lost sight of	Died	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1947	Lost sight of	Died
I.	M	40	21	12	7	M	20	9	6	5
	F	33	24	4	5	F	8	5	1	2
II.	M	21	4	8	9	M	24	14	3	7
	F	18	10	6	2	F	18	12	4	2
III.	M	2	—	—	2	M	4	1	1	2
	F	2	1	1	—	F	4	2	—	2
	M & F	116	60	31	25	M & F	78	43	15	20

1938.

I.	M	34	14	14	6	M	9	5	3	1
	F	31	16	11	4	F	12	7	4	1
II.	M	27	14	8	5	M	33	15	6	12
	F	17	12	3	2	F	11	6	2	3
III.	M	3	1	1	1	M	—	—	—	—
	F	1	1	—	—	F	1	1	—	—
	M & F	113	58	37	18	M & F	66	34	15	17

TABLE 19—continued

Tables showing After History of Quiescent and
Arrested Cases (Insured)—continued

1939.

*No Tubercle Bacilli found.**Tubercle Bacilli found.*

Stage	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1947	Lost sight of	Died	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1947	Lost sight of	Died
I.	M	19	9	5	5	M	5	3	1	1
	F	15	9	2	4	F	7	6	—	1
II.	M	22	14	2	6	M	26	13	4	9
	F	18	9	5	4	F	10	8	1	1
III.	M	1	1	—	—	M	2	1	—	1
	F	3	1	—	2	F	2	2	—	—
	M & F	78	43	14	21	M & F	52	33	6	13

1940.

I.	M	10	10	—	—	M	2	2	—	—
	F	20	15	5	—	F	2	—	2	—
II.	M	14	10	2	2	M	22	15	4	3
	F	4	1	3	—	F	16	14	2	—
III.	M	3	1	—	2	M	—	—	—	—
	F	1	—	—	1	F	4	3	1	—
	M & F	52	37	10	5	M & F	46	34	9	3

1941.

I.	M	15	10	4	1	M	7	5	—	2
	F	15	11	4	—	F	4	3	1	—
II.	M	17	12	2	3	M	22	14	5	3
	F	13	10	2	1	F	14	11	1	2
III.	M	1	—	—	1	M	2	2	—	—
	F	2	—	1	1	F	2	2	—	—
	M & F	63	43	13	7	M & F	51	37	7	7

TABLE 19—continued

Tables showing After History of Quiescent and
Arrested Cases (Insured)—continued

1942.

*No Tubercle Bacilli found.**Tubercle Bacilli found.*

Stage	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1947	Lost sight of	Died	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1947	Lost sight of	Died
I.	M	26	19	3	4	M	6	5	—	1
	F	24	20	2	2	F	10	9	1	—
II.	M	12	9	2	1	M	19	14	2	3
	F	12	8	1	3	F	9	6	2	1
III.	M	2	2	—	—	M	—	—	—	—
	F	2	2	—	—	F	1	1	—	—
	M & F	78	60	8	10	M & F	45	35	5	5

1943.

I.	M	35	30	3	2	M	9	8	—	1
	F	35	29	6	—	F	6	4	2	—
II.	M	15	11	3	1	M	21	17	2	2
	F	18	15	2	1	F	21	16	2	3
III.	M	2	1	—	1	M	2	—	—	2
	F	2	1	—	1	F	2	2	—	—
	M & F	107	87	14	6	M & F	61	47	6	8

1944.

I.	M	56	43	6	7	M	14	13	—	1
	F	48	39	7	2	F	10	10	—	—
II.	M	14	13	—	1	M	31	27	1	3
	F	12	9	1	2	F	24	23	—	1
III.	M	1	1	—	—	M	3	3	—	—
	F	1	1	—	—	F	—	—	—	—
	M & F	132	106	14	12	M & F	82	76	1	5

TABLE 19—continued

Tables showing After History of Quiescent and
Arrested Cases (Insured)—continued

1945.

No Tubercle Bacilli found.

Tubercle Bacilli found.

Stage	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1947	Lost sight of	Died	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1947	Lost sight of	Died
I.	M	42	40	2	—	M	19	16	3	—
	F	26	20	3	3	F	20	20	—	—
II.	M	17	16	1	—	M	50	42	3	5
	F	12	10	2	—	F	40	36	4	—
III.	M	1	—	1	—	M	4	4	—	—
	F	2	2	—	—	F	4	4	—	—
	M & F	100	88	9	3	M & F	137	122	10	5

1946.

I.	M	45	41	4	—	M	24	22	—	2
	F	27	26	1	—	F	15	14	1	—
II.	M	26	25	—	1	M	65	57	3	5
	F	12	12	—	—	F	46	44	1	1
III.	M	3	3	—	—	M	5	5	—	—
	F	3	3	—	—	F	2	2	—	—
	M & F	116	110	5	1	M & F	157	144	5	8

TABLE 20.

Abergele Sanatorium.

Adult Males—Pulmonary.

Year	No. of new cases	Position at the end of 1947				No. of Re-admissions
		Known to be still living	Died in the Sanatorium	Died elsewhere	Lost sight of	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1938	26	10	2	6	8	9
1939	42	22	2	11	7	9
1940	44	27	10	3	4	—
1941	33	15	3	11	4	4
1942	30	23	—	6	1	6
1943	38	23	1	10	4	9
1944	36	29	1	1	5	4
1945	59	49	4	4	2	—
1946	65	57	3	4	1	1
1947	51	49	2	—	—	7
Total ..	424	304	28	56	36	47

Adult Females—Pulmonary.

Year	No. of new cases	Position at the end of 1947				No. of Re-admissions
		Known to be still living	Died in the Sanatorium	Died elsewhere	Lost sight of	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1938	10	5	—	3	2	1
1939	11	6	1	2	2	—
1940	5	4	1	—	—	—
1941	4	1	2	1	—	1
1942	7	6	—	1	—	1
1943	9	5	1	1	2	—
1944	8	8	—	—	—	—
1945	3	2	1	—	—	—
1946	—	—	—	—	—	—
1947	—	—	—	—	—	—
Total ..	57	37	6	8	6	3

TABLE 20—continued
Abergele Sanatorium—*continued*
Child Males—Pulmonary.

Year	No. of new cases	Position at the end of 1947				No. of Re-admissions
		Known to be still living	Died in the Sanatorium	Died elsewhere	Lost sight of	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1938	20	15	—	—	5	1
1939	26	21	1	—	4	2
1940	19	17	—	1	1	2
1941	21	18	—	—	3	2
1942	16	14	—	—	2	2
1943	32	28	1	—	3	1
1944	28	24	2	—	2	1
1945	24	23	—	—	1	—
1946	38	37	1	—	—	2
1947	46	45	1	—	—	1
Total ..	270	242	6	1	21	14

Child Females—Pulmonary.

Year	No. of new cases	Position at the end of 1947				No. of Re-admissions
		Known to be still living	Died in the Sanatorium	Died elsewhere	Lost sight of	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1938	17	11	1	—	5	—
1939	14	8	2	1	3	1
1940	20	14	4	1	1	—
1941	16	14	2	—	—	1
1942	17	15	1	—	1	—
1943	33	30	2	1	—	—
1944	22	18	2	—	2	1
1945	25	22	2	—	1	—
1946	30	27	2	—	1	1
1947	48	47	—	—	1	1
Total ..	242	206	18	3	15	5

TABLE 20—continued

Abergele Sanatorium—*continued**Child Males—Non-pulmonary.*

Year	No. of new cases	Position at the end of 1947				No. of Re-admissions
		Known to be still living	Died in the Sanatorium	Died elsewhere	Lost sight of	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1938	27	21	—	1	5	3
1939	24	21	1	—	2	3
1940	14	13	—	—	1	3
1941	25	19	2	—	4	2
1942	26	21	—	—	5	—
1943	24	23	1	—	—	1
1944	16	15	—	—	1	—
1945	27	27	—	—	—	3
1946	20	20	—	—	—	2
1947	18	17	1	—	—	3
Total ..	221	197	5	1	18	20

Child Females—Non-pulmonary.

Year	No. of new cases	Position at the end of 1947				No. of Re-admissions
		Known to be still living	Died in the Sanatorium	Died elsewhere	Lost sight of	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1938	14	11	1	1	1	3
1939	13	13	—	—	—	2
1940	11	8	—	—	3	—
1941	16	14	—	—	2	—
1942	23	23	—	—	—	—
1943	11	9	1	—	1	2
1944	15	13	2	—	—	—
1945	15	14	—	—	1	—
1946	12	12	—	—	—	—
1947	6	6	—	—	—	—
Total ..	136	123	4	1	8	7

TABLE 21.

Baguley Sanatorium.

Males.

Year	No. of new cases	Position at the end of 1947				No. of Re-admissions
		Known to be still living	Died in the Sanatorium	Died elsewhere	Lost sight of	These are additional to the cases in Column 2 and are given to show the number of beds occupied
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1938	188	46	38	77	27	76
1939	186	46	62	64	14	93
1940	213	74	56	66	17	93
1941	181	68	46	54	13	52
1942	198	71	51	67	9	46
1943	218	88	62	53	15	53
1944	173	99	35	27	12	48
1945	196	143	29	15	9	42
1946	90	64	16	4	6	25
1947	162	130	32	—	—	62
Total ..	1805	829	427	427	122	590

Females.

Year	No. of new cases	Position at the end of 1947				No. of Re-admissions
		Known to be still living	Died in the Sanatorium	Died elsewhere	Lost sight of	These are additional to the cases in Column 2 and are given to show the number of beds occupied
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1938	148	50	25	51	22	41
1939	131	38	40	38	15	48
1940	133	55	28	35	15	37
1941	136	59	31	36	10	29
1942	140	77	34	18	11	22
1943	167	96	37	27	7	20
1944	165	101	30	22	12	37
1945	191	115	45	17	14	26
1946	83	53	23	4	3	30
1947	148	120	25	2	1	30
Total ..	1442	764	318	250	110	320

TABLE 22.

Crossley Sanatorium.

Males.

Year (1)	No. of new cases (2)	Position at the end of 1947				No. of Re-admissions These are additional to the cases in Column 2 and are given to show the number of beds occupied (7)
		Known to be still living (3)	Died in the Sanatorium (4)	Died elsewhere (5)	Lost sight of (6)	
1938	48	23	1	11	13	8
1939	39	20	2	10	7	11
1940	36	8	6	18	4	8
1941	32	25	2	5	—	8
1942	33	16	2	8	7	8
1943	41	30	1	7	3	9
1944	41	32	2	4	3	2
1945	32	23	1	7	1	4
1946	18	15	—	—	3	4
1947	20	20	—	—	—	4
Total ..	340	212	17	70	41	66

Females.

Year (1)	No. of new cases (2)	Position at the end of 1947				No. of Re-admissions These are additional to the cases in Column 2 and are given to show the number of beds occupied (7)
		Known to be still living (3)	Died in the Sanatorium (4)	Died elsewhere (5)	Lost sight of (6)	
1938	61	24	5	20	12	23
1939	66	28	4	18	16	28
1940	65	41	6	8	10	21
1941	45	33	4	5	3	15
1942	62	41	1	10	10	14
1943	36	29	1	2	4	10
1944	46	43	—	1	2	12
1945	48	38	1	4	5	7
1946	57	55	1	—	1	6
1947	29	28	—	—	1	8
Total ..	515	360	23	68	64	144

Historical Data.

The coming year will see the commencement of the Health Services Act and the Tuberculosis Service will undergo certain changes in its character.

Manchester, under the guidance of that great pioneer in the campaign against Tuberculosis—Dr. James Niven, Medical Officer of Health from 1894 to 1922, approved active measures being taken from an early date. As a member of the Astor Committee he assisted in the formulation of the five cardinal requirements issued in reports of that body in 1912 and 1913.

The Committee considered that:—

“ Any scheme which is to form the basis of an attempt to deal with the problem of tuberculosis should provide—

- (1) That it should be available for the whole community.
- (2) That those means which experience has proved to be most effective should be adopted for the prevention of the disease.
- (3) That a definite organization should exist for the detection of the disease at the earliest possible moment.
- (4) That, within practicable limits, the best methods of treatment should be available for all those suffering from the disease.
- (5) That, concurrently with the measures for prevention, detection and treatment, provision should be made for increasing the existing knowledge of the disease and of the methods for its prevention, detection, and cure by way of research.”

In 1912 the position of Tuberculosis Officer was established in the City of Manchester and Dr. D. P. Sutherland was appointed.

The clinical work in association with this was carried out in the Out-Patients Department at Hardman Street, a branch of the Manchester Hospital for Consumption and Diseases of the chest. The physicians there were appointed on a part time basis to carry out the necessary examinations in relation to the Tuberculosis Scheme in Manchester.

At that time the institutional provision made consisted of approximately 62 beds for men, women and children at the Clayton Hospital, 20 beds reserved, at Delamere, and the largest number of all—approximately 500, in the Union Hospitals, Withington and Crumpsall, together with a varying number at the Bowdon Hospital.

With the compulsory notification orders made in 1911 and 1912 a greater accuracy was obtained in our knowledge of the incidence of the disease and the necessity for increased accommodation was obvious.

The National Health Insurance Sanatorium Benefit clauses enabled a grant to the Corporation to be made towards the institutional care of the tuberculous, and of the 1s. 3d. per insured person set aside for Sanatorium Benefits, 9d. was allocated for this in-patient treatment.

To meet the increased demand the Baguley Infectious Diseases Hospital was taken over in its entirety as a Tuberculosis Institution and later Abergele Sanatorium, at that time owned and controlled by the Guardians, was also acquired. 40 more Delamere beds were at the same time subsidised by the Corporation.

In 1915 an extension was made to the Hospital for Consumption at Joddrell Street and was the first Tuberculosis Office established, the work having formerly been carried out under much difficulty in the overcrowded Civic Buildings.

In 1919 a number of beds for adults was allocated at Monsall Fever Hospital, and organisation of the work at Withington Hospital took place by the reservation of wards for both men and women, and a resident Medical Officer was appointed to look after these cases.

Arrangements had already been completed for treatment of adult non-pulmonary cases at the Shropshire Orthopaedic Hospital and at the other general hospitals of the City, *e.g.*, the Manchester Royal Infirmary, Ancoats Hospital, and the Skin Hospital.

In 1932 the new offices in Oxford Road were opened and all the preventive and remedial measures were co-ordinated and directed from that centre. In the same year a large extension at Abergele Sanatorium was completed providing accommodation for 210 children with tuberculosis, both pulmonary and non-pulmonary.

The increase in surgical measures for the treatment of pulmonary tuberculosis involved changes and extension of work at Baguley Sanatorium, where Mr. Graham Bryce, F.R.C.S., attends for regular sessions, operative, and observational.

In these ways accommodation was made available for practically all requirements and the waiting period of patients was reduced to a minimum. Of late years, unfortunately, these available beds have been seriously reduced in number owing to the lack of nursing and domestic personnel. The remedy is difficult to envisage but certain requirements are satisfactory conditions of work and supervision, an appreciation of nursing as a vocation, a much simpler and more practical course of training, and a new and more realistic outlook by the General Nursing Council. The use of nursing orderlies in large numbers and the experience of the value of this type of assistance, and its further extension if necessary, justifies the continuance or increase of this temporary expedient to meet the urgent needs of the sick.

An efficient and complete preventive and remedial organization has been achieved in Manchester with the willing and invaluable co-operation of the medical practitioners and by the loyalty and hard work of all members of the Tuberculosis Office Staff, and a steady decline in both incidence and mortality is taking place. It is hoped that the experimental elements of the new services will not weaken the effectiveness of the campaign.

The Senior Tuberculosis Officer tenders his thanks and appreciation for the work of the Tuberculosis Officers, Medical Superintendents, Nurses, Inspectors, and all members of the office staff in the past 36 years.

Milk Control Section.

City Farms.

There are 34 farms in the City with milch herds, including 2 producing Tuberculin Tested milk and 8 producing Accredited milk.

Bulk sampling of the milk (particularly at milking times) from each farm has been carried out, in addition to periodical examination of the cattle by the Veterinary Inspectors of the Ministry of Agriculture and Fisheries, and, as a result 3 cows suffering from tuberculosis of the udder and 3 showing tubercle bacilli in the sputum were discovered and slaughtered under the Tuberculosis Order, 1938. Samples of the milk have also been examined for cleanliness. The conditions of production at these farms have been generally satisfactory.

Country Farms.

The examination of milk supplied to the City from farms situated outside the boundary was carried out as in previous years, although on a much reduced scale, owing to an acute shortage of guinea pigs available for inoculation at the Public Health Laboratory. Bulk samples from 124 such farms were examined by the biological test for tubercle bacilli and 9 proved positive, giving an incidence rate of 7·3 per cent. as against 7·9 per cent. the previous year. Practically the whole of this milk, however, is pasteurised or subjected to other means of heat-treatment after its arrival at the City dairies, so that any tubercle bacilli which might be present in the milk are killed before such milk is consumed by the public.

A disturbing feature during the year was the fact that a sample of bulk Tuberculin Tested milk being retailed by one of the large City dairies was proved to contain tubercle bacilli by the biological test. This dairy received its Tuberculin Tested milk supply from 5 farms and in order to trace the offending farm, individual samples from each of the suppliers were taken for examination. One of the samples was returned as positive, the remainder negative. The dairy in question is now pasteurising all its Tuberculin Tested milk before delivery to its customers.

94 samples of milk of individual farmers were examined bacteriologically and although 35 samples or 66·0 per cent. of the graded milk were satisfactory, samples of the raw ungraded milk showed only slight improvement on previous years, 18 of the samples or 43·9 per cent. being unsatisfactory. In each case, particulars of the examination results were forwarded to the Medical Officer of Health of the area producing the milk.

City Dairies, Milkshops, etc.

The Milk Control Inspectors have paid over 4,000 visits to farm premises, dairies, and milkshops during the year. Generally speaking, the standard of cleanliness has been maintained at a high level. In no case was it found necessary to institute legal proceedings in respect of contraventions of the Milk and Dairies Acts and Orders and the number of warnings required was much smaller than in previous years.

The working and testing of the pasteurising plants at the 14 dairies licensed for this purpose have been carried out once monthly by the Milk Control Inspectors in addition to their routine visits.

Milk Supply to Municipal Hospitals.

Pasteurised milk supplied to the Corporation hospitals has been sampled regularly at each hospital. The results of the examinations have shown that a uniform high standard of quality and cleanliness has been maintained and on no occasion was milk found to contain tubercle bacilli.

Samples of the raw milk supplied to Booth Hall Hospital from Langho Colony and samples from the Abergele Farm have been examined frequently, and, on the whole, found to be satisfactory. In no case has there been tuberculous infection.

On behalf of the Education Committee, the Milk Control Inspector has paid periodic visits to Oakwood Farm, which supplies Styal Cottage Homes with its milk and samples of the milk have been taken for examination. On one occasion during the latter part of the year, a sample of the milk was found to contain tubercle bacilli. The milk, therefore, was pasteurised for a period until the source of infection had been removed. In all other respects, the supply has been satisfactory.

Milk Sampling on behalf of the Ministry of Food.

The sampling of pasteurised and other heat-treated milk in course of distribution has been carried out by the Milk Control Inspectors on behalf of the Ministry of Food. The results on the whole have been very good, 457 samples (87·1 per cent.) of the 525 samples taken having satisfied the prescribed tests, viz., the Phosphatase Test for efficiency of heat-treatment and the $\frac{1}{2}$ Hour Methylene Blue Test for keeping quality.

A much fewer number than on previous years of complaints from the public regarding premature souring of milk were received in the department. These were investigated and appropriate action taken.

Ice Cream.

The number of premises registered for the manufacture and/or sale of ice cream continues to increase, there now being 881 such premises on the register, against 740 in 1946. The increase is mainly confined to shops from which ice cream is sold but not manufactured; also, water ices are now included in the definition of ice cream given in the Ice Cream (Heat-Treatment, etc.) Regulations, 1947, which came into force on the 1st May, 1947. Conditions over ice cream premises follow the same general line as that adopted for dairies and milkshops. Many shops, on account of the nature of the stock kept, have been permitted to sell ice cream only in sealed packets.

Regular visits of inspection have been made to ice cream premises and the general standard of cleanliness has been good. No prosecutions were instituted during the year, although a number of warnings was required.

It is satisfactory to note that there have been no cases of infection reported to the department during the year which could be traced to ice cream consumption.

Table I.

Analysis of Farms Tested for Tuberculous Milk.

County	No. of Farmers represented by samples of milk	No. of farmers supplying tuberculous milk	Percentage
Cheshire	117	9	7.70
Lancashire	27	1	3.70
Staffordshire	7	—	—
Total	151	10	6.62

Table II.

Tuberculous Infection in Raw Milk (Individual Farmers).

YEAR	Number of farmers represented by samples of milk	Number of farmers supplying tuberculous milk	Percentage	Percentage of farmers from EACH COUNTY whose milk contained tubercle bacilli			
				Cheshire	Lancashire	Derbyshire	Staffordshire
Total for 47 years (1901—1947)	24,415	2,657	10.88				
1945	350	25	7.14	6.52	25.00	6.97	18.18
1946	225	22	9.77	8.61	20.00	6.45	9.9
1947	151	10	6.62	7.70	3.70	—	—

Table III.

Raw Untreated and Heat-Treated Milks (Tuberculosis Rate).

RAW UNTREATED MILK				HEAT-TREATED MILKS			
Grade	No. of samples taken	Found to contain tubercle bacilli	Percentage	Grade	No. of samples taken	Found to contain tubercle bacilli	Percentage
Tuberculin Tested ..	53	1	1.9	Pasteurized	64	—	—
Accredited and un-graded	228	33*	14.5	Heat-treated other than Pasteurised	4	—	—
Totals	281	34*	12.1	Totals	68	—	—

* Included in this figure are 22 samples of bulked mixed farmers' and depot milk and 9 samples of individual farmers' milk taken either at or on arrival at pasteurizing establishments prior to its being pasteurised. The remaining 3 samples represent raw untreated milk and retailed as such.

(1) PASTEURISED AND HEAT TREATED MILK

Place of Collection of Sample	BACTERIOLOGICAL, &C., EXAMINATION OFFICIAL TEST (Sample to pass a Phosphatase Test and ½-hour Methylene Blue Test)					BIOLOGICAL EXAMINATION FOR TUBERCLE BACILLI				
	No. of samples examined	Satisfactory		Unsatisfactory		No. of samples examined	Positive		Negative	
		No.	Percentage	No.	Percentage		No.	Percentage	No.	Percentage
Pasteurising plant at dairy	144	137	95.1	7	4.9	37	—	—	37	100
Hospitals	50	49	98.0	1	2.0	16	—	—	16	100
Schools	41	39	95.1	2	4.9	5	—	—	5	100
On road during distribution	434	369	85.0	65	15.0	10	—	—	10	100
Totals	669	594	88.8	75	11.2	68	—	—	68	100

(2) RAW UNTREATED MILK.

Place of Collection of Sample	BACTERIOLOGICAL EXAMINATION										BIOLOGICAL EXAMINATION FOR TUBERCLE BACILLI				
	GRADED MILK (TUBERCULIN TESTED AND ACCREDITED (sold as such))					UNGRADED MILK (No legal Bacteriological standard)*					No. of samples examined	Positive		Negative	
	OFFICIAL TEST (sample to pass a Methylene Blue and B. Coli. Test)					No. of samples examined	Satisfactory		Unsatisfactory			No.	Per- centage	No.	Per- centage
	No. of samples examined	Satisfactory		Unsatisfactory			No.	Per- centage	No.	Per- centage					
		No.	Per- centage	No.	Per- centage										
City Farms 	27	21	77.8	6	22.2	27	21	77.8	6	22.2	37	1	2.7	36	97.3
Corporations Farms	48	41	85.4	7	14.6	—	—	—	—	—	29	1	3.5	28	96.5
Hospitals 	24	17	70.8	7	29.2	—	—	—	—	—	20	—	—	20	100.0
Mixed farmers from tipping tanks at pasteurising establishments ..	—	—	—	—	—	119	14	11.8	105	88.2	34	13	38.2	21	61.8
“ Pool ” tanker lorries coming into the City	—	—	—	—	—	14	1	7.1	13	92.9	10	9	90.0	1	10.0
On road in course of distribution ..	31	17	54.8	14	45.2	2	—	—	2	100.0	9	1	11.1	8	88.9
Individual country farms (on arrival at City Dairies) 	53	35	66.0	18	34.0	41	23	56.1	18	43.9	142	9	6.3	133	93.7
Totals	183	131	71.0	52	29.0	203	59	29.1	144	70.9	281	34	12.1	247	87.9

* This examination is not officially recognised. It is shown for comparison purposes, however, with the old Grade A standard for raw milk applied, viz., sample not to exceed 200,000 per ml. and B.Coli. absent in 1/100th ml.

TABLE V.

Pasteurizability of Raw Milk Supply.

No. of Samples taken	Raw Untreated Milk from Tipping Tank at Pasteurizing Establishments		The Same Milk					
			Laboratory Pasteurized			Plant Processed		
			Satisfactory		Unsatisfactory	Satisfactory		Unsatisfactory
	No.	%	No.	%	No.	No.	%	%
98	8	8.2	90	91.8	24	67	68.4	31.6

In arriving at the above figures the following standards have been applied:—

Raw Untreated Milk:—Sample not to exceed 200,000 bacteria per ml. and b coli. absent in 1/100th ml. (old “Grade A” standard).

Pasteurized Milk:—Sample not to exceed 100,000 bacteria per ml. (old “plate count” standard).

It will be noted in the above Table that 24 of the “Laboratory Pasteurized” samples were unsatisfactory. This may be explained to some extent by the fact that raw milk may contain large numbers of thermophilic organisms which survive pasteurization. They are commonly the cause of high counts in pasteurized milk. Thus, high counts in pasteurized milk do not necessarily indicate faulty processing or re-contamination, as they may be due to thermophilic bacteria originally present in the raw milk and which have survived pasteurization. They originate on the farm, generally from contamination of the milk by badly washed and unsterilized farm utensils. Thorough cleansing of equipment daily on the farm is essential to prevent trouble from this type of organism. They are not pathogenic.

MANCHESTER MUNICIPAL HOSPITALS PATHOLOGICAL SERVICE.

by Dr. G. Stewart Smith, Director of Pathological Services.

STAFF.

G. Stewart Smith, M.A.(ADMIN.), M.D.	.. ..	Director of Pathological Services.
Lois Stent, M.D.	.. .. .	Pathologist, Withington Hospital Laboratory.
T. G. S. Harkness, L.R.C.P., L.R.C.S., D.C.P.	.. ..	Assistant Pathologist.
J. F. Booth, M.B., B.CH., B.A.O.	.. ..	Resident Clinical Pathologist, Crumpsall Hospital.
Kathleen V. Lodge, M.B., CH.B., D.R.C.O.G.	.. ..	Resident Clinical Pathologist, Withington Hospital.

The tabular summaries given below show that the work of the Pathological Service has been well maintained in all departments and there is again an increase in the total of examinations performed. In last year's report the Emergency Medical Service unit system was used for the first time and the total value of pathological examinations in Emergency Medical Service units was 407,020 ; for 1947 the corresponding figure is 438,273.

	Number of examinations	E.M.S. unit values
At Crumpsall Laboratory for:—		
Crumpsall Hospital	52,240	179,992
Booth Hall Hospital	9,535	40,416
Other Municipal Hospitals	2,618	13,071
Regional Blood Transfusion Service	2,425	4,278
Total	66,818	237,757
At Withington Laboratory for:—		
Withington Hospital	46,806	137,353
Regional Blood Transfusion Service	3,672	7,373
Total	50,478	144,726
At Baguley Laboratory for:—		
Emergency Hospital	8,154	21,431
Sanatorium	4,876	11,142
Total	13,030	32,573
At Booth Hall Laboratory for:—		
Booth Hall Hospital	7,577	23,217
Total number of examinations ..	137,903	438,273

The laboratory at Monsall Hospital is now almost ready for use and the Booth Hall laboratory is nearing completion.

In August, 1947, Dr. J. F. Booth was appointed resident clinical pathologist at Crumpsall Hospital and Dr. K. V. Lodge to a similar post at Withington. The appointments have been very successful and have helped to fill the gap when the laboratories are closed in the evening and at weekends, enabling urgent work to be dealt with expeditiously. In order to provide a full 24 hours service, which is most desirable, there will need to be, in the future, two such posts at each hospital.

Mr. H. V. Street, B.Sc., has been appointed biochemist at the Crumpsall laboratory and Miss Pauline Gorse, B.Sc., assistant biochemist.

Two members of the technical staff obtained final certificates of the Institute of Medical Laboratory Technology; the senior technician at Crumpsall Hospital, in pathological technique, and the technician at Baguley Sanatorium, in bacteriological technique.

A start has been made at the Crumpsall Laboratory in photography as applied to pathology and when further equipment, for which sanction has been given, is available it should be possible for permanent photographic records to be made of all interesting and unusual specimens. These records will be of value, especially for post-graduate teaching.

A paper on "Mycosis Fungoides," by Dr. L. Wertheim and the Director of the Service, is shortly to be published in the Archives of Dermatology and Syphilology.

Baguley Sanatorium.

Examinations made at the Pathological Laboratory
during the year ended 31st December, 1947.

Examination	E.M.S. Hospital	Sanatorium
BLOOD:		
HAEMATOLOGY—		
Red cell count	440	111
Haemoglobin estimation ..	518	149
White cell count	383	110
Differential count	279	88
Reticulocytes	—	2
Malaria parasites	4	1
Platelet count	1	1
Bleeding time	17	13
Coagulation time	17	—
Sedimentation rate	30	—
Red cell volume	30	—
SEROLOGY—		
Agglutination test	2	4
Grouping	134	59
Compatibility test	305	148
BACTERIOLOGY—		
Cultural examination	5	3
CHEMISTRY—		
Bilirubin	1	1
Glucose tolerance test	—	—
Sugar	17	10
Urea	10	10
URINE:		
Routine microscopical examination	85	52
Microscopical examination for tubercle bacilli	34	31
Cultural examination	32	15
Albumen	73	42
Bile	6	2
Bile salts	1	1
pH	70	39
Protein	1	—
Specific gravity	2	4
Sugar	65	42
Urobilin	—	2
Miscellaneous examinations	1	1
SWABS:		
Microscopical examination	97	18
Cultural examination for C. diphtheriae	94	18
Cultural examination for haemolytic streptococci	94	19
SPUTUM:		
Routine microscopical examination	186	14
Microscopical examination for tubercle bacilli	2,383	2,344
Concentration test for tubercle bacilli	532	379
Cultural examination for tubercle bacilli	55	187
Cultural examination for predominating organisms	890	3
FAECES:		
Microscopical examination	18	32
Cultural examination	16	26
Cultural examination for tubercle bacilli	6	—
Chemical examination	7	6

Examinations made at the Pathological Laboratory—continued

Examination	E.M.S. Hospital	Sanatorium
CEREBROSPINAL FLUID:		
Cell count	3	6
Microscopical examination	—	5
Cultural examination	—	4
Globulin	3	4
Sugar	3	5
Chlorides	3	6
PUSS AND EFFUSIONS:		
Routine microscopical examination	295	243
Microscopical examination for tubercle bacilli	207	204
Concentration test for tubercle bacilli	2	4
Cultural examination	275	202
Cultural examination for tubercle bacilli	5	—
Penicillin sensitivity test	25	2
Penicillin estimation	1	1
Coagulase	50	20
Bile solubility	45	—
LARYNGEAL SWABS:		
Cultural examination for tubercle bacilli	44	127
GASTRIC CONTENTS:		
Concentration for tubercle bacilli	167	15
Cultural examination for tubercle bacilli	23	9
PULMONARY LAVAGES:		
Concentration for tubercle bacilli	29	15
Cultural examination for tubercle bacilli	24	9
Vaccines	—	2
Smears—Microscopical examination for gonococci	1	1
—Microscopical examination for Tr. vaginalis	1	—
Fractional Gastric Analysis	7	3
Modified Rideal Walker Test	—	2
Total		13,030
		8,154
		4,876

Booth Hall Hospital.

Examinations made at the Pathological Laboratory
during the year ended 31st December, 1947.

BLOOD:—

Haemoglobin estimation	1,619
Red cell count	828
White cell count	2,211
Differential count	769
Reticulocytes	25
Platelet count	15
Grouping	87
Compatibility test	96
Bleeding time	44
Coagulation time	40
Red cell fragility test	11
Sedimentation rate	1,830
Malaria parasites	2
7,577	

The total of 7,577 examinations=23,217 E.M.S. units.

Withington Hospital.

*Examinations made at the Pathological Laboratory
during the year ended 31st December, 1947.*

BLOOD:—*Haematology—*

Haemoglobin estimation	..	..	..	..	..	..	..	8,314
Red cell count	..	..	..	..	..	..	..	3,308
White cell count	..	..	..	..	..	..	..	4,842
Differential count	..	..	..	..	..	..	..	1,532
Reticulocytes	..	..	..	..	..	..	..	219
Platelet count	..	..	..	..	..	..	..	47
Malaria parasites	..	..	..	..	..	..	..	21
Mean cell diameter	..	..	..	..	..	..	..	2
Rh. factor	..	..	..	..	..	..	..	3,137
Bleeding time	..	..	..	..	..	..	..	32
Coagulation time	..	..	..	..	..	..	..	36
Prothrombin index	..	..	..	..	..	..	..	92
Sedimentation rate	..	..	..	..	..	..	..	877
Haematocrit	..	..	..	..	..	..	..	584
Red cell fragility	..	..	..	..	..	..	..	12
Sternal puncture	..	..	..	..	..	..	..	34
Miscellaneous	..	..	..	..	..	..	..	1

Serology—

Grouping	..	..	..	..	..	..	..	2,895
Compatibility test	..	..	..	..	..	..	..	1,061
Agglutination test	..	..	..	..	..	..	..	83
Cold agglutination	6
Paul Bunnell reaction	12

Bacteriology—

Culture	93
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Chemistry—

Alkali reserve	23
Bilirubin	99
Calcium	32
Chloride	20
Cholesterol	10
Colloidal gold	..	..	..	..	..	..	..	44
Phosphatase (serum)	..	..	..	..	..	..	..	170
Phosphate	..	..	..	..	..	..	..	18
Protein	..	..	..	..	..	..	..	33
Sugar	..	..	..	..	..	..	..	2,003
Sulphonamides	..	..	..	..	..	..	..	11
Thymol turbidity	..	..	..	..	..	..	..	51
Urea	..	..	..	..	..	..	..	1,107
Miscellaneous examinations	..	..	..	..	..	..	..	36

Carried forward 30,897

Examinations made at the Pathological Laboratory—continued

Brought forward 30,897

URINE :—

Routine microscopical examination	2,400
Microscopical examination for tubercle bacilli	105
Cultural examination	2,289
Ascorbic acid	19
Sugar	111
Urea clearance test	175
Urea concentration test	49
Miscellaneous chemical examinations	158

FAECES :—

Microscopical examination	346
Cultural examination	547
Occult blood test	260
Other chemical examinations	13

SWABS :—

Microscopical examination	50
Cultural examination for <i>C. diphtheriae</i>	157
Cultural examination for haemolytic streptococci	224

SPUTUM :—

Cytology for carcinoma cells	52
Microscopical examination for tubercle bacilli	1,857
Concentration test for tubercle bacilli	39
Cultural examination	396

PUS AND EFFUSIONS: —

Routine microscopical examinations	665
Microscopical examination for tubercle bacilli	139
Cultural examination	698
Penicillin sensitivity test	112
Penicillin estimation	2
Streptomycin sensitivity test	6
Coagulase	171
Streptococcal grouping	15
Miscellaneous examinations	11

Smears—

Microscopical examination for gonococci	436
Cultural examination for gonococci	240
Microscopical examination for <i>Tr. vaginalis</i>	81
Microscopical examination for <i>Tr. pallidum</i>	8

Carried forward 42,728

Examinations made at the Pathological Laboratory—continued

Brought forward											42,728
CEREBROSPINAL FLUID :—											
Cell count .. .. .	..	..	..	..	..	..	..	..	..	..	389
Microscopical examination .. .. .	..	..	..	..	..	..	..	..	..	..	83
Cultural examination .. .. .	..	..	..	..	..	..	..	..	..	..	78
Protein .. .. .	..	..	..	..	..	..	..	..	..	..	350
Globulin .. .. .	..	..	..	..	..	..	..	..	..	..	290
Sugar .. .. .	..	..	..	..	..	..	..	..	..	..	76
Chloride .. .. .	..	..	..	..	..	..	..	..	..	..	209
Colloidal gold curve .. .. .	..	..	..	..	..	..	..	..	..	..	86
Miscellaneous examinations .. .. .	..	..	..	..	..	..	..	..	..	..	32
Vaccines .. .. .	..	..	..	..	..	..	..	..	..	..	21
Glucose Tolerance Test .. .. .	..	..	..	..	..	..	..	..	..	..	23
Fractional Gastric Analysis .. .. .	..	..	..	..	..	..	..	..	..	..	328
Basal Metabolic Rate .. .. .	..	..	..	..	..	..	..	..	..	..	53
Mantoux Test .. .. .	..	..	..	..	..	..	..	..	..	..	15
Casoni Test .. .. .	..	..	..	..	..	..	..	..	..	..	1
PATHOLOGY :—											
Post-mortem examinations .. .. .	..	..	..	..	..	..	..	..	..	..	322
Histological preparations .. .. .	..	..	..	..	..	..	..	..	..	..	1,689
Miscellaneous examinations .. .. .	..	..	..	..	..	..	..	..	..	..	33
											<hr/> 46,806
REGIONAL BLOOD TRANSFUSION SERVICE :—											
Groupings .. .. .	..	..	..	..	..	..	..	..	..	..	1,821
Rh. factor .. .. .	..	..	..	..	..	..	..	..	..	..	940
Plasma withdrawals .. .. .	..	..	..	..	..	..	..	..	..	..	911
											<hr/> 3,672
											<hr/>
Total											50,478

Total=50,478 examinations=144,726 E.M.S. units.

Crumpsall Hospital.

*Examinations made at the Pathological Laboratory
during the year ended 31st December, 1947.*

Type of Examination	For Crumpsall Hospital	For Booth Hall Hospital	For Withington Hospital	For Baguley Sanatorium and Emergency Hospital	Total
BLOOD:					
HAEMATOLOGY—					
Red cell count	3,186	..	..	..	3,186
Haemoglobin estimation ..	10,550	..	..	..	10,550
White cell count	3,312	..	..	..	3,312
Differential count	562	..	..	..	562
Reticulocytes	331	..	..	..	331
Malaria parasites	26	..	..	..	26
Platelet count	170	..	..	..	170
Bleeding time	57	..	..	..	57
Coagulation time	57	..	..	..	57
Red cell fragility	6	..	..	..	6
Sternal puncture	32	1	..	..	33
Sedimentation rate	8	..	..	..	8
Mean cell diameter	9	..	..	..	9
SEROLOGY—					
Agglutination test	41	41	..	..	82
Paul Bunnell reaction	22	14	..	..	36
Grouping	3,303	..	..	..	3,303
Compatibility test	1,243	..	..	..	1,243
Rh. factor	2,623	11	..	..	2,634
BACTERIOLOGY—					
Cultural examination	279	82	..	..	361
CHEMISTRY—					
Alkali reserve	34	1	..	..	35
Bilirubin	120	3	..	..	123
Calcium	27	13	..	4	44
Cephalin cholesterol	44	..	4	..	48
Chlorides	21	..	1	..	22
Cholesterol	158	5	21	3	187
Colloidal gold	74	2	2	..	78
Glucose tolerance test	71	12	..	..	83
Icterus index	10	..	..	..	10
Phosphate	15	4	..	2	21
Phosphatase (serum)	251	..	..	..	251
Potassium	5	..	3	..	8
Protein	178	19	32	10	239
Prothrombin	126	3	..	..	129
Pyruvic acid	48	..	6	..	54
Sodium	17	..	1	..	18
Sugar	954	120	..	..	1,074
Sulphonamides	207	167	..	..	374
Thiocyanate	29	..	..	..	29
Thymol flocculation	136	2	..	..	138
Thymol turbidity	84	3	5	..	92
Urea	1,306	92	..	..	1,398
Uric acid	4	..	1	..	5
Miscellaneous examinations	15	2	..	1	18
URINE:					
Routine microscopical examination	3,201	459	..	..	3,660
Microscopical examination for tubercle bacilli	51	11	..	..	62
Cultural examination	3,095	452	..	..	3,547
Test for Addison's disease	6	..	..	..	6
Ascorbic acid	49	..	..	..	49
Bence-Jones protein	24	..	..	..	24
Biological test	7	2	..	..	9
Chlorides	2	..	..	..	2
Diastase	16	..	..	..	16
Friedman test	44	3	41	5	93
Ketosteroids	15	..	22	..	37
Lead excretion	1	..	..	..	1
Pregnandiol	118	1	66	..	185
Urea clearance test	150	10	..	..	160
Urea concentration test	101	5	..	..	106
Urobilinogen	3	1	..	..	4
Stomach contents—					
Microscopical examination ..	17	217	..	..	234
Biological test	5	124	..	..	129
FAECES:					
Microscopical examination ..	69	29	..	..	98
Cultural examination	531	1,952	..	..	2,383
Chemical examination	704	2	..	..	706
Fat analysis	10	24	5	..	39

Examinations made at the Pathological Laboratory—continued

Type of Examination	For Crumpsall Hospital	For Booth Hall Hospital	For Withington Hospital	For Baguley Sanatorium and Emergency Hospital	Total
SWABS:					
Microscopical examination..	279	740	..	..	1,019
Cultural examination for C. diphtheriae	234	740	..	..	974
Cultural examination for haemolytic streptococci..	280	512	..	..	792
Virulence test	4	4	..	..	8
SPUTUM:					
Cytology for carcinoma cells	56	..	..	..	56
Microscopical examination for tubercle bacilli ..	2,371	87	..	..	2,458
Concentration test for tubercle bacilli	28	4	..	..	32
Cultural examination ..	1,083	40	..	..	1,123
Biological test	8	..	..	18	26
PUS AND EFFUSIONS:					
Microscopical examination..	1,480	635	..	..	2,115
Microscopical examination for tubercle bacilli ..	71	33	..	..	104
Cultural examination ..	1,454	688	..	..	2,142
Biological test	24	18	39	1	82
Penicillin sensitivity test ..	161	191	..	..	352
Coagulase	185	173	..	..	358
Protein estimation	28	..	..	..	28
Smears—					
Microscopical examination for gonococci	373	10	..	..	383
Cultural examination for gonococci	83	..	..	..	83
Microscopical examination for monilia	55	..	..	..	55
Microscopical examination for Tr. vaginalis	219	..	..	..	219
Microscopical examination for Tr. pallidum	8	..	..	..	8
Milk—					
Bacterial count .. .. .	..	29	..	..	29
Fat content .. .. .	..	28	..	..	28
Biological test .. .. .	..	24	..	..	24
CEREBROSPINAL FLUID:					
Cell count	468	212	..	..	680
Microscopical examination	275	240	..	..	515
Cultural examination	240	120	..	..	360
Protein	567	196	..	..	763
Globulin	401	171	..	..	572
Sugar	152	40	..	..	192
Chloride	468	188	..	..	656
Colloidal gold curve	344	8	16	1	369
Fractional Gastric Analysis ..	377	2	..	..	379
PATHOLOGY:					
Basal Metabolic Rate ..	175	..	..	..	175
Vaccines .. .. .	..	61	..	..	61
Post-mortem examinations	611	197	..	10	818
Histological preparations ..	1,700	373	..	191	2,264
Miscellaneous examinations in- cluding glucose-saline—culture; distilled-water—sterility; hair fungi	34	13	..	..	47
	52,240	9,535	265	246	62,286

In addition, the following examinations were carried out at Crumpsall :—

For Monsall Hospital.

Post-mortem examinations	4
Histological preparations	219
Urine—Friedman test	14
Faeces—	
Microscopical examination	21
Cultural examination	62
Cerebrospinal fluid—	
Cell count	9
Microscopical examination	2
Cultural examination	2
Protein	490
Chlorides	32
Globulin	326
Sugar	455
Colloidal gold curve	462

2,098

For Swinton Homes.

Throat swabs—	
Microscopical examination	3
Cultural examination for haemolytic streptococci	3
Cultural examination of C. diphtheriae ..	3
	9

For the Regional Blood Transfusion Service.

Blood groupings	1,849
Kahn tests	4
Plasma withdrawals	572

2,425

Grand Total 66,818

HOSPITALS AND INSTITUTIONS.

General Statistics for the Year ended 31st December, 1947.

	GENERAL HOSPITALS			SPECIAL ESTABLISHMENTS					INSTITUTIONS		Totals
	Crumpsall Hospital	Withington Hospital	Booth Hall Hospital	Rose Hill Home	Langho Colony	Langho Emergency Hospital	Swinton Home	Dr. Garrett Memorial Home	Park House (Chronic Sick and Mental Wards)	Withington Institution (Chronic Sick and Aged and Infirm Wards)	
1. Total admissions (including infants born in hospital)	12,942	11,079	5,422	343	37	..	20	358	717	622	31,540
*2. Women confined in hospital	3,007	1,921	..	..	..	..	..	..	..	..	4,928
3. Live births	2,962	1,875	..	..	..	..	..	..	..	..	4,837
4. Still-births	93	78	..	..	..	..	..	..	..	..	171
†5. Deaths among the newly-born (<i>i.e.</i> , under four weeks old)	87	118	..	..	..	..	..	..	..	..	205
6. Deaths among children under one year (including those given under 5)	87	120	164	..	..	..	..	..	..	..	371
7. Maternal deaths among women confined in hospital	5	5	..	..	..	..	..	..	..	..	10
8. Total number of deaths	1,293	1,034	371	..	21	9	5	..	181	329	3,243
9. Discharges (including infants born in hospital)	11,671	9,972	4,810	310	44	7	17	332	566	228	28,037
10. Duration of stay of patients included in 8 and 9 above—											
(a) Four weeks or less	9,629	9,348	4,236	133	1	..	..	13	422	34	23,816
(b) Exceeding four but under thirteen weeks	2,874	1,378	764	121	1	..	..	184	127	136	5,585
(c) Exceeding thirteen weeks	461	280	181	56	63	96	22	135	194	387	1,875
11. Beds occupied—											
(a) Average during the year	1,120	601	299	52	513	Hospital closed down	107	88	556	753	..
(b) Highest	1,228 on 14-1-47	698 on 17-1-47	350 on 17-1-47	76 on 3&4-7-47	536 on 1-1-47	10-5-47	111 on 12-11-47	110 on 18-3-47	612 on 9-9-47	790 on 25-6-47	..
(c) Lowest	1,011 on 19-12-47	500 on 12-1-47	241 on 13-8-47	26 on 19-3-47	501 on 11-10-47	..	102 on 20-11-47	57 on 2-1-47	494 on 6-4-47	708 on 1-1-47	..
†12. Surgical operations under general anaesthetic (excluding dental operations)	2,007	2,715	1,638	..	..	..	..	..	..	..	6,410
13. Abdominal sections	932	1,070	331	..	..	..	..	..	..	..	2,333

* Relates to women discharged from or dying in hospital.

† Relates only to children born in hospital.

‡ Including spinal anaesthesia.

¶ The Emergency Hospital attached to Langho Colony was being used to accommodate chronic sick patients transferred, temporarily, from Crumpsall and Withington General Hospitals.

Sources of admission of patients discharged from or dying in General Hospitals during the Year ended 31st December, 1947 (excluding births).

Source of Admission	Booth Hall Hospital	Crumpsall Hospital	Withington Hospital	Totals
District medical officer	54	75	5	134
General practitioner	2,486	5,466	5,449	13,401
Voluntary hospital	527	163	126	816
Municipal institution *	150	134	42	326
Municipal hospital *	168	90	45	303
Other †	1,705	3,607	2,238	7,550
Staff cases ‡	4	115	135	254
Maternity and child welfare centres..	18	121	5	144
Accident ward	32	1	480	513
Emergency	37	230	606	873
Totals	5,181	10,002	9,131	24,314

* Transfers.

† At Booth Hall Hospital the classification "Other " includes cases sent in by the Education Department and the central Health Department. Maternity cases are classified as "Other " at Withington and Crumpsall Hospitals.

‡ Includes staff from Corporation establishments other than Health establishments.

Average Duration of Stay.

The average duration of stay in hospital for all cases "dismissed" in 1947 was 23·46 days, as compared with 23·59 days in 1946, and 28·53 in 1945. Details of the last ten years are shown in the subjoined table.

Average duration of stay of patients discharged from, or dying in, the three general hospitals.										
Hospital	1938—days	1939—days	1940—days	1941—days	1942—days	1943—days	1944—days	1945—days	1946—days	1947—days
Booth Hall ..	25·41	27·43	26·05	26·54	26·32	23·93	22·42	25·80	21·99	25·81
Crumpsall ..	28·03	34·21	38·93	46·20	32·29	33·28	31·07	34·28	27·53	25·98
Withington..	26·15	28·85	26·01	26·10	22·80	23·51	22·68	23·33	19·87	19·77
All three hospitals ..	26·82	30·83	31·46	34·59	27·35	27·67	26·13	28·53	23·59	23·46

**Classification (by disease groups) of days of maintenance of patients
discharged from or dying in the General Hospitals, 1947.**

DISEASE GROUP	BOOTH HALL		CRUMPSALL		WITHINGTON		TOTALS	
	Total days	Average stay (days)	Total days	Average stay (days)	Total days	Average stay (days)	Total days	Average stay (days)
1. *Infectious disease	11,208	47·09	12,154	39·98	15,924	70·15	39,286	51·09
2. Cancer and other tumours	152	21·71	17,777	42·33	12,442	34·56	30,371	38·59
3. Rheumatism, diseases of nutrition, etc.	7,421	59·34	12,095	48·38	9,142	37·16	28,658	46·15
4. Diseases of blood and blood-forming organs	766	31·91	3,515	40·40	2,087	32·61	6,368	36·39
5. Chronic poisoning .. .. .	..	..	21	5·25	65	13·00	86	9·56
6. Diseases of nervous system and sense organs	6,394	19·09	30,087	73·20	13,783	32·43	50,264	42·92
7. Diseases of circulatory system ..	3,718	29·05	34,976	46·26	20,499	27·12	59,193	36·09
8. Diseases of respiratory system ..	19,311	20·57	29,937	39·55	15,713	24·25	64,961	27·71
9. Diseases of digestive system.. ..	1,049	10·81	33,007	26·70	29,975	21·91	64,031	23·70
10. Non-venereal diseases of genito-urinary system	2,866	19·90	20,256	21·73	18,761	19·34	41,883	20·47
11. Diseases of pregnancy, childbirth, and the puerperal state	..	..	6,477	8·19	7,757	8·94	14,234	8·58
12. Diseases of the skin	9,410	24·07	13,792	40·68	9,872	22·28	33,074	28·20
13. Non-tuberculous diseases of bones, joints, etc.	6,091	40·61	5,118	57·51	4,240	24·23	15,449	37·32
14. Congenital malformations	2,298	41·04	59	14·75	216	14·40	2,573	34·31
15. Diseases of early infancy	2,791	28·19	532	5·91	877	7·37	4,200	13·64
16. Old age, senility, and senile decay..	..	..	34,418	161·59	5,475	52·14	39,893	125·85
17. †Violence	6,741	17·38	11,144	33·87	13,104	26·26	30,989	25·48
18. Ill-defined diseases	1,640	20·50	452	18·83	344	14·33	2,436	19·03
19. Convalescence .. .. .	..	..	..	..	..	..	..	..
20. ‡Healthy	5,074	30·38	70,999	11·98	37,675	10·18	113,748	11·61
Totals	86,930	25·81	336,816	25·98	217,951	19·77	641,697	23·46

* Including tuberculosis patients.

† Including accidents associated with fracture.

‡ Including mothers and infants discharged from maternity wards.

CONVALESCENT HOMES.

Patients in convalescent homes on 1st January 123

Patients admitted, 1st January to 31st December—

Adults 102

Children 586

—— 688

Patients discharged, 1st January to 31st December—

Adults 98

Children 575

—— 673

Remaining in convalescent homes on 31st December—

Adults 4

Children 134

—— 138

Summary of Admissions.

Name of Home	Number of Patients	
	Adults	Children
<i>Adults—</i>		
The Royal Alexandra Hospital, Rhyl	—	—
The Blackburn and District Convalescent Home, St. Annes ..	2	—
The Devonshire Royal Hospital, Buxton	3	—
The West Hill Convalescent Home, Southport	96	—
The Lear Home of Recovery, West Kirby	1	—
<i>Children—</i>		
Dr. Garrett Memorial Home, Conway	—	356
The Children's Convalescent Home, West Kirby	—	17
The Royal Alexandra Hospital, Rhyl	—	65
St. Joseph's Convalescent Home, Freshfield	—	143
The Devonshire Royal Hospital, Buxton	—	1
The Ilkley Convalescent Home, Ilkley	—	4
	102	586
Total	688	

Between February and December the numbers of admissions to the Dr. Garrett Memorial Home, Conway, was reduced from 22 to 14 per fortnight. This was due to shortages of staff at that home.

Summary of Discharges.

Name of Home	To home im- proved	To home fit	To Booth Hall Hospital	To Abergele Sanatorium	On Demand	Total
<i>Adults—</i>						
The West Hill Convalescent Home, Southport	—	90	—	—	2	92
The Devonshire Royal Hospital, Buxton	3	—	—	—	—	3
The Royal Alexandra Hospital, Rhyl	—	—	—	—	—	—
The Blackburn and District Convalescent Home, St. Annes-on-Sea	—	2	—	—	—	2
The Lear Home of Recovery, West Kirby	—	1	—	—	—	1
	3	93	—	—	2	98
<i>Children—</i>						
The Dr. Garrett Memorial Home, Conway	—	294	2	3	21	320
The Children's Convalescent Home, West Kirby	—	23	—	—	2	25
The Royal Alexandra Hospital, Rhyl	—	64	—	—	9	73
St. Joseph's Convalescent Home, Freshfield	—	145	—	—	7	152
The Devonshire Royal Hospital, Buxton	—	1	—	—	—	1
The Ilkley Convalescent Home Ilkley	—	4	—	—	—	4
	—	531	2	3	39	575
Total adults and children						673

75 journeys were necessary by members of the staff in taking children to and from the various convalescent homes.

Outfits of clothing.

A sum of nearly £4 was spent by the Health Committee on clothing for children when being sent to convalescent homes, as compared with £9 in 1946. The Social Welfare Committee spent £2 2s. 5d. on clothing for one adult patient who was in receipt of Social Welfare relief.

Several patients who had no clothing coupons were helped with second-hand clothing by the Manchester and Salford Methodist Mission. The Catholic Needlework Guild also supplied clothing, but coupons were required for this as the clothing was new.

Recommendations for Convalescent Treatment.

Recommendations for adult patients to receive convalescent treatment were received from the Senior Tuberculosis Officer, District Medical Officers, Crumpsall Hospital, and Withington Hospital.

The children's recommendations were received from the Senior Tuberculosis Officer, the School Medical Officer, Child Welfare doctors, Booth Hall Hospital, the Duchess of York Hospital for Babies and St. Mary's Hospitals.

For various reasons, 14 adult and 132 children's recommendations were cancelled. Particulars of these are as follows :—

Adults—

By patient	.. .. .	9
By doctor (patient not fit to travel)	.. .. .	5
		<hr/>
		14

Children—

By parents	.. .. .	48
By School Medical Officer	.. .. .	24
Appointments not kept by parents	.. .. .	60
		<hr/>
		132
		<hr/>

102 adults and 586 children received convalescent treatment as compared with 95 adults and 560 children in 1946, showing an increase of 7 adults and 26 children.

98 adults and 575 children were discharged as compared with 98 adults and 556 children in 1946.

Infections.

Dr. Garrett Memorial Home, Conway	Measles	.. .. 8 cases
	Rubella	.. .. 8 cases
	Whooping cough	1 case
	Mumps	.. .. 8 cases
St. Joseph's Convalescent Home, Freshfield	Measles	.. .. 1 case

There is still 1 epileptic patient chargeable to the Manchester Corporation living at an establishment not controlled by the Corporation—St. Elizabeth's Home for Epileptics, Much Hadham, Hertfordshire. She has been allowed to remain at this home because she has been there since reaching the age of 16 and looks upon St. Elizabeth's as her home. She is now 34 years old.

ABERGELE SANATORIUM.

By Dr. G. F. Barran, Medical Superintendent.

STAFF.

(a) Visiting Consultants—

- E. D. Telford, M.A., M.SC., F.R.C.S. Surgeon
- A. Graham Bryce, M.D., F.R.C.S., D.P.H. Thoracic Surgeon
- J. Roberts, M.B., CH.B., F.R.C.S. Ear, Nose, and Throat Surgeon
- T. J. Phillips, M.R.C.S., L.R.C.P. Ophthalmologist
- R. J. Pye, L.D.S. Dentist

(b) Full time—

- G. F. Barran, M.D. Medical Superintendent
- J. B. Morrison, B.SC., M.D. Deputy Medical Superintendent
- N. Landau, M.D. Resident Assistant Medical Officer
- Elsie B. Jones, S.R.N., S.C.M., T.A. Matron
- H. E. Connolly Secretary-Steward

The available beds are allocated according to the age of the patient and the type of disease, as follows :—

Age	Type of Tubercle	Sex		Number of Beds
		M.	F.	
1—4	Bone and Joint Tuberculosis	10	10	20
4—15	„ „	35	35	70
1—4	Primary Tuberculosis and its complications . .	10	10	20
4—15	„ „	34	34	68
—	Admission Ward	—	—	11
		89	89	189
Adults (Plas Uchaf)		52	—	52
		Total available beds		241
		Isolation Ward		10

All beds on the children's side have been fully utilised with the exception of those on the Admission Ward which were out of commission until the end of April owing to staff shortages. Nonetheless, the number of children awaiting admission has at no period during the year reached double figures.

TABLE 1.
General Classification of Cases Treated in 1947.

Classification on Admission	In residence on 1st January, 1947		Admitted		Discharged		Died		In residence on 1st January, 1948	
	Adults	Children	Adults	Children	Adults	Children	Adults	Children	Adults	Children
Pulmonary Group :—										
T.B. Minus	9	66	14	69	12	65	—	—	11	70
T.B. Plus, Group 1	8	13	8	10	9	4	—	—	7	19
T.B. Plus, Group 2	24	5	32	4	22	3	2	1	32	5
T.B. Plus, Group 3	5	2	4	4	5	2	3	—	1	4
Observation	—	2	—	8	—	6	—	—	—	4
Non-Pulmonary Group :—										
Bones and Joints	—	60	—	14	—	17	—	—	—	57
Abdominal	1	8	—	3	1	8	—	1	—	2
Other Organs	—	3	—	—	—	3	—	—	—	—
Peripheral Glands	—	2	—	9	—	6	—	1	—	4
Observation	—	1	—	1	—	1	—	—	—	1
Totals	47	162	58	122	49	115	5	3	51	166

TOTAL PATIENTS TREATED.

Adults' Section of the Sanatorium.. .. 105
Children's Section of the Sanatorium 284

Table 2.

The result of treatment in these 165 discharged cases was as follows (6 observation cases and 1 case who was in residence for less than 28 days are excluded from this table) :—

	Total Cases Discharged	Quiescent	Improved	Stationary	Worse	Died
Adults (pulmonary)	53	5 (9·5%)	33 (62·3%)	5 (9·4%)	5 (9·4%)	5 (9·4%)
Adult (non-pulmonary)	1	1 (100%)	—	—	—	—
Children (pulmonary)	75	25 (33·4%)	49 (65·3%)	—	—	1 (1·3%)
Children (non-pulmonary)	36	14 (38·8%)	20 (55·6%)	—	—	2 (5·6%)

The figures in brackets indicate the percentage of the total patients in each group discharged with their disease in the condition stated at the head of the column.

It is of interest to record that of the 75 children discharged in the pulmonary group 74, or 98·7 per cent., were either quiescent or improved on discharge ; and of the 36 children discharged in the non-pulmonary group 34, or 94·4 per cent., were either quiescent or improved on discharge.

Of the 54 adult patients discharged, in the pulmonary group 38, or 71·7 per cent., were either quiescent or improved on discharge.

The children who died were in residence for 47, 71, and 142 days respectively. The cause of death was :—

- (1) Pulmonary tuberculosis.
- (2) Tuberculous spine.
- (3) Tuberculous peritonitis.

The Type of Case admitted to the Children's Wards.

In recent years evidence has accumulated to suggest that there has been a considerable increase in the incidence of tuberculosis in children, but until a more uniform system of notification is agreed upon by those concerned it is not possible to discover whether this reported increase is real or apparent. In order to ensure the necessary supervision of infected children it is customary in certain districts to notify those with minimal disease, whilst in others there is a natural disinclination to attach a label which, rightly or wrongly, is considered by many to be a stigma of permanent duration. There is much to be said for the proposal that a more temporary grade such as "intimation" should be used for minimal cases requiring careful domiciliary or convalescent treatment only, and it is regretted that the Ministry's new classification has not taken cognisance of this difficulty. Until some such revision is introduced it is not possible to gain any useful knowledge from the published statistics concerning the incidence of tuberculosis in childhood in various parts of the country.

Whether or not there has been an increased morbidity, it is gratifying to report that the beds available at the Abergele Sanatorium are in excess of the demand and that it has been possible to provide early, thorough, and, if necessary, prolonged treatment for Manchester children and yet to offer accommodation for patients under the care of other local authorities. A recent follow up over a minimum period of four years of 55 cases of pleural effusion developing under the age of 14 years has shown no instance of subsequent pulmonary tuberculosis, an encouraging sign of the efficacy of the prolonged institutional care which it has been possible to provide at this Sanatorium for the past seventeen years.

The type of case admitted can be seen from the list given below, which classifies the admissions of children under 16 years old into several main groups :—

- (1) Uncomplicated but complete primary lung complex—11 cases (12·2 per cent.).
- (2) Mediastinal adenitis without discernible lung primary focus—
 - (a) slight 9 cases (10·0 per cent.)
 - (b) extensive .. 13 ,, (14·4 per cent.).
- (3) Erythema nodosum and phlyctenular conjunctivitis—3 cases (3·3 per cent.).
- (4) Pleural effusion—23 cases (25·6 per cent.).
- (5) Chronic miliary disease—3 cases (3·3 per cent.).
- (6) Partial or complete lobar or lobular collapse—12 cases (13·3 per cent.).
- (7) Pulmonary tuberculosis of "adult" type—16 cases (17·8 per cent.).

(The figures in brackets give the percentage of the total tuberculous pulmonary lesions.)

(8) Non-pulmonary disease:—

(i) Bones and joints—Spine	..	..	..	..	..	5
Hip	..	..	..	..	..	2
Knee	..	..	..	..	..	6
Tarsus	..	..	..	..	..	1
(ii) Abdominal—Early primary infection	..	..	..	..	..	2
Peritonitis	..	..	..	..	..	1
(iii) Cervical adenitis	..	..	..	..	..	9

- (9) Non-tuberculous 6

A history of family contact was obtained in 59 cases, or 51·3 per cent., of all tuberculous cases admitted.

The cases with a non-pulmonary lesion are grouped separately, but attention is drawn to the fact that particularly in the younger age groups, 4 out of 5 cases show a well marked, frequently gross, intrathoracic lesion and the usual sub-division into pulmonary and non-pulmonary cases is an artificial one. It does not recognise the nature of tuberculosis as a general disease and has in the past led, with sometimes unfavourable results, to the diagnosis and treatment of non-pulmonary tuberculosis as a separate entity divorced from the initial lesion, usually present in the chest or abdomen.

The number of cases of bone and joint tuberculosis admitted during the past three years is as follows :—

1945	..	..	..	..	..	30
1946	..	..	..	..	..	16
1947	..	..	..	..	..	14

It is too early to say whether the reduction noted in the years 1946-47 reflects a true fall in the occurrence of non-pulmonary disease in Manchester children, but such a finding tends to confirm the general belief that the incidence of bovine infection is decreasing. It is also an encouraging sign that the diagnosis of the primary infection is being made at an earlier stage with a consequent reduction in the risk of the blood borne disseminations which lead to the crippling lesions in bone and joint.

Some indication of the work performed is given below:—

Operations.

Phrenic nerve interruption 24, adhesion section 31, orchidectomy 1, excision of glands 2, curettage and drainage of pubic bone 1, strabismus correction 2, miscellaneous 4, totalling 65.

Pneumothorax.

Inductions	31
Refills	1,226

Pneumoperitoneum.

Inductions	11
Refills	170

Plaster Work.

The number of plaster splints made was 96.

Laboratory Work.

Sputum—Ordinary examination (Ziehl-Neelsen)	363
Cultures (Löwenstein-Jensen medium)—	
Gastric lavage	693
Sputum	166
Urine	18
Pleural Fluid	54
Pus	14
Other examinations	56

The value of the examinations of the gastric contents for tubercle bacilli in diagnosis and in assessing progress under treatment, continues to be confirmed. No adverse response on the part of the patients is met with and compared with the laryngeal swab method, cultures on Löwenstein medium have proved more frequently positive. Increasing use of the procedure both in adults and children is reported.

X-ray Department.

The total number of X-ray films taken was 1,334 and there were 669 screening examinations.

The increase in the numbers of X-ray examinations is explained chiefly by a more complete realisation of the value of lateral views in obtaining a more accurate localisation of the pulmonary lesions and in revealing shadows hidden in the postero-anterior view.

Physiotherapy Department.

Massage and exercises	6,130
Infra-red and Faradism	259
Actino-therapy	607

Infectious Disease.

It is again gratifying to report that during the past year no case of infectious fever has occurred amongst the children.

School.

Attention continues to be paid to the necessity of ensuring that, where the state of physical health allows, all children should have adequate school instruction in the basic subjects, in order to provide that after discharge they should not be found to be behind the average school child in accomplishment.

Nursing Staff.

The nurses' training school is now available for the reception of male nurses and a number of valuable recruits have been obtained, many of them have proved their worth and there is no doubt that the male nurse will play an important part in the staffing of sanatoria in the future. It is regretted that no more favourable report can be given, than in past years, on the number of nursing staff employed. It has been possible to keep the wards open and every bed in use, but only with the ever present anxiety that the standard of treatment is in danger and that too much is being asked of the available staff. Various reports and recommendations for easing the nursing problem published during the year have done little to improve a difficult situation and it is felt that the special requirements of tuberculosis nursing have not yet been given adequate consideration; the changes contemplated under the new Health Services Act, may, it is hoped, give an opportunity to rectify this omission.

BAGULEY SANATORIUM and EMERGENCY HOSPITAL.

By Dr. H. G. Trayer, Medical Superintendent.

H. G. Trayer, M.B., B.CH., B.A.O., D.P.H.	.. Medical Superintendent.
Norah H. Burrows, S.R.N., S.C.M.	.. .. .. Matron
R. L. Hall, F.H.A.	.. .. .. Secretary-Steward.

Sanatorium.**STAFF.***(a) Visiting Consultants—*

A. Graham Bryce, M.D., F.R.C.S., D.P.H.	.. .. Surgeon (Thoracic Surgery).
A. R. Hunter, M.D., F.R.F.P.S., D.A.	.. .. Anaesthetist (Thoracic Unit).
J. L. Halliwell, L.D.S.	.. .. Consultant Dental Surgeon).

(b) Full time—

J. Cuthbert, M.D., F.R.F.P.S., D.P.H.	.. .. Deputy Medical Superintendent.
L. Parker, M.A., B.M., B.CH.	.. .. Senior Assistant Medical Officer.
V. E. Sherburn, M.B., CH.B., M.R.C.S., L.R.C.P.	Resident Assistant Medical Officer.
G. L. Moore, L.R.C.P. & S. (I.)	.. .. Resident Assistant Medical Officer.
A. J. Coello, Doctor in Medicine and Surgery (Barcelona)	.. .. Resident Surgical Officer (newly authorised appointment).
J. C. Mellor, M.B., CH.B.	.. .. Medical Registrar (Supernumary):

The activities of the hospitals fall mainly under three headings, the Sanatorium, the Military Wing, and the Emergency Hospital, and it is under these headings, therefore, that the report is written. All three sections are administered by one central staff, the officers being as shown above.

Beds.

The establishment of beds is 420 of which only approximately 300 were, on the average, available daily for occupancy owing to the continued shortage of nurses. (*See* remarks under the heading of "Staff.") The difficulties of hospitals nursing the tuberculous have become more acute on this account, although recruitment of part-time nurses under the much publicised scheme enabled this Sanatorium's figures of beds available to better—though very slightly—those for the previous year. Two wards are at present closed down and the capacities of some of the others are reduced to figures below their maxima.

During the year 469 patients were admitted, almost double the figure for the previous year—an exceptionally low one—so it will be appreciated that as the number of beds available was approximately the same, average in-patient days per individual were fewer. There were three main reasons for this :—

- (a) The closure of the tuberculosis wards of Withington Hospital in February brought about the admission of chronic cases to the Sanatorium and deaths were consequently higher.
- (b) The number of patients taking their own discharge before the completion of treatment was much higher than in the previous year—76 as against 32 in 1946. Domestic and financial considerations were chiefly responsible for this, although there can be no doubt that many found sanatorium routine irksome and were unable to settle down.
- (c) The pressure of a considerable waiting list on the available beds brought about the early discharge of some cases where home conditions were sufficiently suitable as to allow them to convalesce there.

It may be of interest to give the classification by sexes of certain of the data for the current year in the table of admissions and discharges which follows. There were 221 female admissions and 248 male, 170 female and 153 male discharges, and 50 female and 67 male deaths.

**Admissions, Discharges, etc., compared with the previous 4 years,
including cases from administrative areas outside Manchester.**

	1943	1944	1945	1946	1947
Patients—					
In hospital, 1st January, 1947	322	362	323	329	(1) 249
Admitted	498	461	515	284	(2) 469
Discharged	392	416	405	296	(3) 323
Died	66	84	104	68	(4) 117
Total treated :	820	823	838	613	(5) 718
Remaining in hospital, 31st December ..	362	323	329	249	(6) 278
Daily average number of beds occupied	366	373	354	281	290
Average length of stay of patients discharged—					
Males (days)	209	254	255	323	245
Females „	293	276	276	256	265
Average length of time in hospital of fatal cases—					
Males (days)	208	411	474	516	269
Females „	288	276	164	132	289
Case mortality, percentage	8.05	9.79	12.303	11.09	12.87

NOTE.—The figures for Manchester cases only are:—

- (1) 229
- (2) 402
- (3) 253
- (4) 112
- (5) 631
- (6) 266

Cases from outside the Manchester C.B. Area.

	North Cheshire Joint Hospital Board	Other Authorities for surgical treatment
In hospital 1st January	10	10
Admitted	7	60
Discharged	6	64
Died	3	2
Remaining in hospital, 31st December	8	4

Classification	Condition on Discharge								Died		Total
	Quiescent		Improved		Stationary		Worse				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Respiratory : A.1	1	2	6	6	2	3	—	1	—	1	22
„ A.2	1	3	2	3	—	1	—	—	—	—	10
„ A.3	—	—	—	—	—	—	—	—	—	1	1
„ B.1	3	—	6	5	2	—	—	—	1	—	17
„ B.2	1	3	59	57	43	38	2	1	31	20	255
„ B.3	—	—	7	4	9	19	7	12	35	28	121
Totals	6	8	80	75	56	61	9	14	67	50	426
309*								117			

* The remaining 14 discharges were of non-tuberculous observation cases.

Sputum conversion was obtained in 85 cases, giving a rate of 30 per cent. on positive cases discharged and 24 per cent. on all positive cases on admission.

Observation Cases.

14 patients were admitted for the normal four-weekly stay to undergo observation. Their disposal was as follows :—

Diagnosis on discharge from observation	Stay under 4 weeks		Stay over 4 weeks		Totals		Total
	M.	F.	M.	F.	M.	F.	
Tuberculous	—	—	—	—	—	—	—
Non-Tuberculous	1	—	1	7	2	8	10
Doubtful	—	4*	—	—	—	4	4
Totals	1	4	1	7	2	12	14

* Took own discharge.

The following table shows the distribution of patients by grades as at 31st December. It is to be noted that the percentages of absolute and bed rest cases include a number of bedridden patients for whom no active treatment is possible but who require a great deal of nursing care.

	Total patients	Absolute	On bed rest	Up 1-2 hours	Up 3-4 hours	Up 5-6 hours	Up 7-8 hours	Up 10 hours	Up all day
Males	158	63	40	10	11	16	11	3	4
Females	120	70	23	11	1	11	—	2	2
Total	278	133	63	21	12	27	11	5	6
Percentage.. ..	100	47.8	22.7	7.6	4.3	9.7	3.9	1.8	2.2

Using the same figures as above, *i.e.*, the number of in-patients on 31st December, the following figures give an indication of the treatment being given to those patients on that date. The comment made on the preceding table is similarly applicable again and the figures as further influenced by the high incidence of pulmonary tuberculosis in the older age groups of male patients admitted.

	Total Patients	A.P.T.'s	P.P.'s	Phrenics	Extra-pleural pneumothoraces	Thoracoplasty	Routine
Males	158	20	4	5	1	11	117
Females	120	26	8	5	2	11	68
Total	278	46	12	10	3	22	185
Percentage ..	100	16.5	4.3	3.6	1.1	8.0	66.5

Co-ordinated Thoracic Surgery Scheme.

As the Regional Surgical Centre under this Scheme the Sanatorium admitted 60 patients from other County and County Borough areas during the year. These patients make up only a portion of the operative work carried out, as to the above figure must be added those patients from the Manchester area already patients in this Sanatorium or others under the control of the City who are transferred here and who require surgical interference. The Unit, under the direction of Mr. Graham Bryce, has worked to capacity the whole year

but even so there were on the 31st December some 39 patients from other areas awaiting admission. Details are :—

Surgical procedures.

	Thoraco- plasty	Thoraco- scopy	Adhesion Cutting	Phrenic Nerve	Pneumo- peri- toneum	Others	Total
County of—							
Cheshire	1	—	—	—	—	—	1
Cumberland ..	—	—	—	—	—	*1	1
County Boroughs of—							
Bolton	1	2	3	—	—	—	6
Burnley	1	—	—	1	—	—	2
Bury	1	1	—	—	—	—	2
Oldham	—	2	1	13	—	—	16
Rochdale	—	2	—	—	—	—	2
Salford	—	—	12	—	1	†2	15
Warrington ..	2	—	—	—	—	—	2
Wigan	2	3	1	3	4	—	13
Totals ..	8	10	17	17	5	3	60

* 1 Pneumonectomy.

† 1 Cavity drainage ; 1 Empyema.

Reference has been made previously to the surgical work of the Thoracic Unit but to get a more complete impression of the Unit's activities the following table—together with comparative figures for 1945 and 1946—is given :—

	1945	1946	1947
Thoracoplasty (each stage counted separately) ..	79	86	98
Phrenic Nerve operations	32	47	64
Jacobaeus	24	39	51
Monaldi Cavity Drainage	7	4	6
Thoracoscopy	29	15	17
Bronchoscopy	7	8	6
Others, including Stab Drainage	10	8	15
Total	188	207	257

Patients who have undergone thoracoplasties and who have been discharged are invited to attend an Out-Patient's Clinic at frequent intervals. These are held on a Sunday under the supervision of Mr. Graham Bryce. A sputum container is sent to the patient with a letter making the appointment a fortnight before the patient is due to attend. The patient returns the container in good time so that the specimen contained in it may be subjected to laboratory investigation and the result be available on the day the patient is seen. The patient is X-rayed on arrival. Any informative material coming to light as a result of the examination is brought to the attention of the local tuberculosis officer, together with any opinion or recommendation made by Mr. Graham Bryce.

Special Investigations, etc.

Four papers by members of the staff appeared in the medical press during the year. They were :—

(a) "The Recruitment and Training of Nurses—the Working Party's Report," by the Medical Superintendent—*Tubercle*, 1947, XXVIII., 256.

This article in considering the report from the point of view of the requirements of tuberculosis nursing suggests that the following modifications would be a definite contribution towards solving the problem of the shortage of staff in sanatoria :—

(1) The student nurse should have two years bedside training in nursing in any type of approved hospital.

(2) The continuation of the grade of Assistant Nurse.

(b) "The Quiescent Case of Pulmonary Tuberculosis—A Plea for More Rigid Standards," by the Deputy Medical Superintendent—*Tubercle*, 1947, XXVIII., 211.

A brief summary emphasises that three main methods are used on the sputum free case :—

(1) Gastric Wash-outs.

(2) Laryngeal Swab.

(3) Pulmonary Lavage.

In the latter the patient's throat is sprayed with anaesthetic and 10 c.c.s of saline are injected down the windpipe. The washings are coughed up and analysed. They can be examined directly or cultured, whereas in methods (1) and (2) specimens have to be cultured. However, it was felt that the Laryngeal Swab is the method of choice as it is quick and easy and causes less discomfort to the patient. It has been adopted as a routine procedure in the Sanatorium. By this means it can be proved that 12 per cent to 30 per cent. of patients on discharge, although they may have no sputum, can still excrete tubercle bacilli and therefore infect other persons, especially little children.

(c) "A Note on the Management of Tuberculous Empyema," by the Resident Surgical Officer—*Tubercle*, 1947, XXVIII., 136.

The appearance of blood in the empyema is of good prognostic significance. 2 cases were successfully treated by the installation of blood into the empyematous cavity.

(d) "Scapulectomy and Thoracoplasty," by the Resident Surgical Officer—*British Journal of Tuberculosis*, 1947, XLI., 75

Resection of half the scapula prior to rib resection in a thoracoplasty operation seems to be of a prophylactic value in avoiding infection of the extrapleural space and in reducing the number of stages to the operation. In addition this technique saves a considerable amount of muscle division.

It is disappointing that there were no supplies of Streptomycin available for treating patients in this Sanatorium and no patients were acceptable to the nearest centre where treatment is given. The value of this drug as an "umbrella" in thoracoplasty is now recognised and it is regrettable that patients are to be denied the protection thus afforded. The absence of Streptomycin has, however, not deterred us from investigations into the value of new preparations, not only for the treatment of tuberculosis, but for dealing with secondary organisms that are insensitive to Penicillin.

The whole problem of the treatment of Tuberculous Empyemata is under survey and it is hoped that the coming year will produce a worth while contribution for dealing with a complication that in this age of Collapse Therapy leaves a small residue of cases that have not benefited by such therapy.

Physiotherapy.

This department is now fully established under a physiotherapist, in sole charge, who has received training at the Brompton Hospital and is, therefore, fully cognisant of the important part her art must play in not only preparing patients for major thoracic surgery but also in their rehabilitation after operation. Figures for this department are :—

	1946	1947
Daily average number of patients on register	29	29
Number of treatments	5,003	4,917
New patients	—	90

Radiological Department.

The work of this Unit continues to expand as the following figures show :—

	1946	1947
Skiagrams taken	2,500	3,050
Patients screened	5,300	5,500

Included in the above figure of films taken are the following :—

Bronchograms	175 films	28 patients
Pleurographs or sinograms	41 „	10 „
Tomograms	184 „	22 „
Cavernograms	15 „	5 „

A number of the chest films taken were in respect of nursing and ancillary staffs who are X-rayed periodically, particularly new entrants, including those recruited under the Ministry of Health Part-time Nursing Scheme. Modernisation of the apparatus will be necessary in the near future.

Pathological Laboratory.

As the activities of this Department come within the province of the Director of Pathological Services and the details of the tests carried out for the Sanatorium are fully recorded elsewhere, no detailed figures on them are being given here. Suffice it to say, as with the other units of the hospital, the figures of this department show a substantial increase on those for the previous year.

Dental.

The Consultant Dental Surgeon continued to hold regular weekly clinics. The following details relate to the work carried out in the clinic, although the dentist also makes regular visits to bed patients on the ward.

Patients' attendances	356
Extractions	118
Fillings	20
Dentures	11
Repairs and adjustments to dentures	3
Scalings, dressings and attention to gums	15

The services rendered are free to the patients with the exception that if dentures are necessary payment must be made for them.

Ringway Airport.

The Sanatorium medical staff continued to attend the Airport to meet incoming aeroplanes from other countries. Total number of passengers screened was 3,318 and 12 persons were medically examined.

It is hoped that the recently authorised appointment of an Airport Receptionist will obviate the meeting of every aeroplane by a medical officer although, as heretofore, authorised Sanatorium medical officers will be available for medical examinations.

Education.

Weekly lectures over the internal radio system are still continued and provide the readiest means of teaching the individual patient all that should be known of the disease and its prevention. Under this heading also can be included the Scheme of Adult Education, though at present it is confined to shorthand and typewriting. Patients who have reached some proficiency in the former are allowed to continue if they wish when they proceed to domiciliary treatment.

Admittedly the number of patients interested in Art are few, and up to date it has not been possible to obtain an expert to advise this small band of enthusiasts.

Adult education among the patients admitted to the Sanatorium presents many difficulties. It only appeals to the few, mostly in the younger age groups, and many of these are on active treatment which may necessitate periods in bed, thereby breaking the continuity of teaching.

Recreation.

The number of patients able to and desirous of attending entertainments other than films are few, and therefore bookings have been much curtailed.

The magazine "San Toy" has now become a quarterly issue and as such should continue to serve its useful purpose.

Hitherto it has been possible to maintain a fair degree of efficiency in the facilities offered by the libraries—one each for males and females—but it does seem that the day is approaching when the services of someone other than a patient must be obtained so that bed patients will never want for a book.

Occupational Therapy.

This remains an integral part of the treatment, although in the Emergency Hospital it is mainly diversional. The provision of suitable handicrafts for bed patients is a problem that is difficult to solve. So often does the bed patient desire to carry on with some handicraft that is totally unsuitable if posture in bed is to be considered of any importance. Under present circumstances certain handicrafts can prove extremely lucrative under the scheme in vogue in the Emergency Hospital. Goods made by tuberculous patients in hospital require disinfection before being disposed of.

There should be a linking up of occupational therapy with vocational training—hitherto this has not been possible, though advocated for many years. A reference was made last year to a suitable venture, but without much hope. However, the National Assistance Act gives renewed hope in so far that under Section 29 it would be possible for a Local Authority to provide such a scheme.

Nursing Staff.

The following are examination successes obtained by the Nursing Staff :—

(a) Preliminary State Examination	.. .. .	1
(b) Tuberculosis Association Certificate.. .. .		7
,, ,, ,, —Part I. only	..	3
(c) Final State Examination	.. .. .	1

It seems almost redundant to make any reference to the persisting shortage of nursing staff, but it is felt that reiteration of the fact is one way—possibly the only one—of stimulating public opinion.

The suggested abolition of the grade of Assistant Nurse will be a calamity of the first magnitude for many hospitals. There are still many women anxious to become, and indeed capable of becoming, excellent practical nurses but who do not desire to submit themselves to elaborate training, yet want to learn the art of caring for the sick and disabled and to possess the designation of nurse. Most of these women would not object to the title of Assistant Nurse. Such women will be lost to nursing if it is decided to call them by some fancy name.

Here the number of beds available could not be maintained without the assistance of nursing attendants or orderlies, few of whom are resident. The majority being non-resident and part-time this can never be satisfactory because such staff choose their own period of duty and seldom, if ever, are they available for night duty or Saturdays and Sundays. The whole weight of nursing the 290 patients consequently falls during those periods on those members of the resident nursing staff on ward duties.

The community owe a debt to the resident nursing staff of this Sanatorium who carry on so cheerfully under a burden that never seems to lighten.

Hospital Helpers.

The position is rather better but the absence of resident cooks creates difficulties than cannot entirely be overcome by non-residents working shifts.

The Mowbray Report has certainly brought about improved conditions for the majority but has fallen short of the objectives that appeared desirable in 1936 and which were outlined in my report of that year. Briefly those objectives were :—

- (a) teaching domestic workers their job
- (b) grouping domestic workers into—
 - (i) cleaning grades,
 - (ii) cooking grades ;
- (c) advancement to be by merit ;
- (d) rewards for long service.

Under the present National Joint Council awards there is no recognition for long service. This omission is remarkable when it is common experience that a small nucleus of long service workers often provide that degree of stability which is essential for efficiency in a section of hospital life that is characterised by frequent changes of personnel. Another remarkable omission is that the grade of Assistant Head Laundress is not recognised.

Military Wing.

STAFF.

Medical Specialist and Officer Commanding

Unit Major M. M. Nagley, R.A.M.C.

Medical Officers Cap. T. M. Welsh, R.A.M.C.
Lieut. (Miss) E. M. K. Irwin, R.A.M.C.

This wing is part of the system of Army Tuberculosis Wings set up at various points in the United Kingdom attached to either Military Hospitals, E.M.S. Hospitals, or civilian sanatoria. Their purpose is mainly twofold:—

- (a) to relieve the pressure on beds in Military Hospitals dealing with all types of diseases ;
- (b) to ensure that the service patient suffering from pulmonary tuberculosis should receive treatment before proceeding to a civilian sanatorium in his own home area.

The Baguley Military Wing, attached to the Sanatorium and housed in the E.M.S. Hospital, has admirably fulfilled these purposes. It is staffed by service personnel and Q.A.I.M.N.S. (R.) nursing officers, although for general administration and services it forms an integral part of the Sanatorium, coming under the control of the Medical Superintendent.

Co-ordination between the Military Wing, Sanatorium, and the E.M.S. Hospital has been good and full advantage has been taken of the hospital's facilities in thoracic surgery, radiology, physiotherapy, occupational therapy, and pathological services.

The number of cases admitted to the Wing during the year under review was 413—details are as follows :—

1. Respiratory	..	..	..	..	..	..	..	..	..	408
(a) Pulmonary Tuberculosis	..	..	..	..	..	..	..	..	..	376
(b) Pleurisy and Effusion	..	..	..	..	..	..	..	..	..	29
(c) Tubercular Bronchitis	..	..	..	..	..	..	..	..	..	3
2. Non-respiratory	..	..	..	..	..	..	..	..	..	5
(a) Glands of neck	..	..	..	..	..	..	..	..	..	2
(b) Peritonitis	..	..	..	..	..	..	..	..	..	2
(c) Pott's Disease	..	..	..	..	..	..	..	..	..	1

Total .. 413

In so far as length of stay in Sanatorium was dependent upon the waiting lists of civilian institutions in the patients' home area, the condition on discharge was extremely variable, so that no purpose would be served in presenting statistics for this. Some patients stayed a mere day or so, some for several months, and some have been in for over a year.

Intended to deal with the North-West district of Western Command, the Wing had admitted patients mainly from domiciliary areas ranging from Carlisle to Birmingham, but convoys of patients arriving mainly from South Africa, Germany, and more recently India, have at times led to relaxation of the domiciliary qualifications for admission. Following is a brief note of the home areas of the cases admitted during 1947 :—

Lancashire	..	..	..	..	..	..	..	74
Manchester	..	..	..	..	..	..	..	61
Liverpool	..	..	..	..	..	..	..	50
Cheshire	..	..	..	..	..	..	..	47
Wales	..	..	..	..	..	..	..	32
Staffordshire	..	..	..	..	..	..	..	29

The remaining cases have been admitted from Coventry, Warwickshire, Birmingham, Durham, Gloucestershire, and Lincolnshire, in that order of frequency.

Patients domiciled in Eire, West Indies, the Channel Islands, and France (Free French Forces) completed the number.

Finally, notwithstanding the transient nature of the Wing, that active therapy apart from ordinary routine is practised is borne out by the following table of treatments on patients :—

Artificial Pneumothorax Inductions..	..	..	39
Pneumoperitoneum Inductions ..	..	..	14
Phrenic Nerve Operations ..	..	..	31
Jacobaeus Adhesion Section ..	..	..	40
Thoracoplasty ..	..	..	6
Bronchoscopy ..	..	..	4
Monaldi Cavity Drainage ..	..	..	2
Stab Drainage ..	..	..	1

All cases treated surgically are seen regularly by the Sanatorium Resident Surgical Officer under the supervision of the Consultant Thoracic Surgeon, Mr. Graham Bryce, and receive physiotherapeutic instruction before and after operation.

Since late 1947 the Wing has been used as a Film Interpreting Centre for the Mass Radiography Unit No. 10 operating at Preliminary Training Centres between Carlisle and Shrewsbury. Some 4,000 micro-films have been read on the projector up to date.

BAGULEY EMERGENCY HOSPITAL.

STAFF.

(a) *Chest Unit* :—

(1) Visiting Consultants—

A. Graham Bryce, M.D., F.R.C.S., D.P.H.	.. Surgeon and Director
Frank Nicholson, M.B.E., M.D., M.CHIR., F.R.C.S.	Surgeon
B. P. Robinson, F.R.C.S.	.. .. . Ear, Nose, and Throat Surgeon
R. Ellis, M.D., F.R.C.P.	.. .. . Physician
T. Dinsdale, M.B., CH.B., D.A.	.. .. . Anaesthetist

(2) Full time—

C. Parish, B.SC., M.B., CH.B.	.. .. . Registrar
L. D. Walker, M.R.C.S., L.R.C.P.	.. .. . Resident Assistant Medical Officer

(b) *Plastic and Maxillo-Facial Unit* :—

(1) Visiting Consultants—

Professor F. C. Wilkinson, M.SC., M.D., D.D.SC.	Director.
A. Weldon Moule, B.D.S.	.. .. . Oral Surgical Specialist

(2) Full time—

A. H. R. Champion, M.B.E., F.R.C.S.	.. .. . Surgeon in Charge
A. McDowall, F.R.C.S.	.. .. . Surgeon
H. J. J. Blackwood, M.B., B.CH., B.A.O.	.. Resident Assistant Medical Officer
D. G. Lyon, L.D.S. Senior Dental Officer

(c) *Consultant Radiologist* :—

D. J. Mitchell, M.B., B.CH., B.A.O., D.M.R.E.	..
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(d) *Resident Anaesthetist* :—

C. T. Barry, M.D.(Paris), L.R.C.P., L.R.C.S., L.R.F.P.S., D.A.	(from 1st January, 1948).
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Beds.

Although the bed establishment of the hospital was nominally fixed by the Ministry of Health for the current year at 680, this figure includes those beds set aside for the treatment of service cases of pulmonary tuberculosis and also some 60 beds in two wards loaned to the Christie Hospital and Holt Radium Institute but which for administrative—not for staffing—purposes still form part of the Emergency Hospital.

The hospital activities, therefore, for the purpose of this section of the report mainly centred round the work done in the Chest, Plastic, and Maxillo-Facial Units, for the combined use of which there were only some 100 beds available. This figure would have been much higher had there been nurses available to staff two empty wards which had to be closed, but, as mentioned in other sections of the report, the acute shortage of nurses which affected the Sanatorium was similarly experienced in the Emergency Hospital.

The figures of admission, etc., which follow must NOT be taken as a comparative indication over the last few years of the activity of the Units above-mentioned for in both 1945 and 1946 large numbers of Service cases were admitted for treatment in the general, medical, and surgical sections. These Units were closed down in 1946 and since then the number of civilian cases being treated has increased to the almost total eclipse of Service cases. These latter numbered only 10 per cent. of the 940 admissions during the year under review.

Admissions and Discharges.

	1945	1946	1947
Patients—In hospital, 1st January	405	233	66
Admitted	3,120	1,316	840
Discharged	3,282	1,462	838
Died	10	21	23
In hospital, 31st December	233	66	45
Daily average number of beds occupied	333	152	94
Average length of stay of patients who have been discharged—in days	37	41	40
Average length of time in hospital of total cases—			
Males—in days	51	50	38
Females—in days	—	40	15
Case mortality	·003	·014	·06

Age Analysis on Admission.

Age	Chest	Plastic	Jaw	Totals
0—14 years	46	88	10	144
15—24 „	63	110	53	226
25—34 „	47	87	52	186
35—44 „	50	70	22	142
45—54 „	36	29	14	79
55 and over	28	25	10	63
Totals	270	409	161	840

Chest Unit.

A total of 270 patients of both sexes were admitted to this non-tuberculous chest unit. There were 17 deaths. Patients are admitted either through Mr. Graham Bryce's clinic at the Manchester Royal Infirmary or on recommendation by the Visiting Consultants of the Unit.

The number of operations performed was 236—details are as follows :—

Pneumonectomy, right side	4
left side	3
Lobectomy, right side	5
left side	20
Lingulectomy	2
Thoracotomy for—	
First stage Lingulectomy	1
Inoperable Carcinoma	4
Spontaneous Pneumothorax	1
Cystic Bronchiectasis	1
Removal of Dermoid Cyst	2
Removal of sub-diaphragmatic F.B. and repair of diaphragmatic hernia	1
Giant Cyst of Lung	1
Ganglioneuroma	1
Exploration	1
Thoracoscopy and Pleural Poudrage	9
Rib Resection and Drain	16
Thoracoplasty	9
Phrenic Crush	5
Bronchoscopy	107
Bronchoscopy and Bronchograms (under general anaes- thetic—children)	19
Various other operations—	
Exploration of sinus	2
Secondary suture of wound	5
Intercostal Stab Drain	3
Decapsulation of right kidney	1
Others	13

236

There is no out-patients' clinic at this hospital, although follow-up is effected at the Manchester Royal Infirmary with whom there is close liaison to the extent that a copy of the case notes of patients here is sent to the Infirmary.

Plastic and Maxillo-Facial Unit.

Details of patients treated are as follows :—

	Plastic	Jaw Injuries	Total
Admissions	*409	161	570
Cases admitted for first time	270	178	448
Deaths	6	—	6
Operations performed	488	†156	644
Out-patients' attendances	862	584	1,446

* Of this figure 55 also received treatment in the Jaw Injuries Unit and are not included in the 161 admissions for that Unit.

† Includes 51 done in conjunction with the Plastic Surgeon but excludes ordinary extractions.

Of the 409 patients admitted to the Plastic Unit 180 were cases of burns :—

Healed burns cases admitted .. Males	47
Females	34
New burns cases admitted .. Males	48
Females	51
	180

Age Analysis of Burns Cases.

Age	Old		New	
	Male	Female	Male	Female
0—14 years	13	14	21	18
15—24 „	16	5	7	10
25—34 „	9	6	9	6
35—44 „	6	4	6	7
45—54 „	2	5	4	6
55 and over	1	—	1	4
Totals	47	34	48	51

Jaw Injuries.*Analysis of cases.*

Fractures	110
Dental Diseases	75
Ancillary to Plastic	24
Special review and investigation	7
Total	*216

* Includes 55 cases admitted to the Plastic Unit.

Treatments given to patients	4,346
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Analysis of the 110 admissions due to fracture of mandible and/or maxilla, showing cause of injury. Of the 110—10 were re-admissions, leaving a total of 100 new cases.

Motor accidents	36
Assaults and brawls	25
Industrial accidents	14
Organised games	10
Fits and faints	8
Other causes	7
Total	100

(83 males ; 17 females)

156 Theatre surgical treatments were given on jaw injuries. They were :—

Major surgery	27
Sequestrectomies	10
Epithelial Inlays	5
Bone Grafts	2
Facial operations	7
Fractures, cysts, etc.	105
Total	156

Special prothesis inserted :—

Prothetic appliances	36
Intra-oral VII N. Palsy Appliances	21
Obturators	5
Acrylic Bath	700
Metal and Acrylic Prothesis	5

19 special tissue supports and moulds for plastic operations were made and some 184 splints and stagings, also 32 locating bars were used.

Photographic and Radiographic Section.

X-rays taken in Unit's X-ray Department	621
---	-----

Analysis :

Postero-Anterior	..	..	..	..	..	..	..	..	..	154
Lateral	..	..	..	..	..	..	..	..	..	266
Intra-orals	..	..	..	..	..	..	..	..	..	105
Occlusals	..	..	..	..	..	..	..	..	..	96

Total 621

Photographs taken 5,216

Analysis :

Dental cases	..	..	..	..	..	..	..	..	3,425
Plastic cases	..	..	..	..	..	..	..	..	1,409
Others (staff, etc.)	..	..	..	..	..	..	..	..	382

Total 5,216

Prints processed (including 1,508 special enlargements) 20,118

Transparencies 96

Routine Dental Treatment.

Patients seen and treated 276

Extractions 96

Fillings 135

Scaling and polishing 16

Gum treatment 11

Dentures 3

Repairs 15

Total 276

Pathological.

The pathological work of the hospital, as in the case of the Sanatorium, is under the direction of the Director of Pathological Services to which report reference should be made for details of tests done and examinations carried out.

Radiological.

Difficulties in staffing were experienced during the year and at one time there was for the Unit only one unqualified radiographer and the work had to be supervised by the Sanatorium Radiographer. Even so there was a large increase in the number of skiagrams taken, as the following figures show :—

	1946	1947
Chests	1,692	2,947
Bronchograms	164	477
Sinograms	57	78
Sinuses	141	342
Mandible	82	270
Facial	66	228
Orthopaedic	207	276
Barium Meals	130	49
Others	49	46
Totals	2,588	4,713

Films taken for the Christie Cancer Unit totalled 1,220, as against 890 in 1946.

The equipment has stood up very well but is now showing signs of deterioration and modernisation of the department will be a necessity at no distant date.

Physiotherapy.

Treatments	.. .. .	8,634
Average number of patients treated each month	..	77
Average number of treatments per patient each month		10

Occupational Therapy.

This remains popular and will do so as long as the present facilities for preferential supplies of raw material and unrestricted disposal of finished articles exist.

Education.

The problem of teaching facilities for children can only be solved by voluntary help. The average stay is 27 days and such a short stay precludes official recognition of the problem. Owing to the shortage of nursing staff the control of children is most difficult and those that are up run wild. Though handicrafts are available such hobbies do not and cannot absorb all their time.

Recreation.

The need for organised recreation is not now so great as there are fewer long-term cases. The wards are supplied with indoor games and radio. The hospital is indebted to the members of the B.R.C.S. who continue to run the libraries so efficiently.

Staff.

It is only by the help of part-time nurses, nursing attendants, and orderlies that the Chest and Plastic Units have succeeded in functioning to the extent that the statistics prove. The nucleus of resident staff is often hard pressed but meet extra calls and emergencies in the profession's traditional manner. The irony of the position is that within the hospital there are two Units adequately staffed—the Military Wing and the Christie Hospital wards.

Conclusion.

It appears desirable to make certain observations of a general character.

The lack of an effective boundary fence makes it quite impossible to control visitors and ambulant patients, particularly when the latter include children. Such conditions had to be accepted during war time and when the hospital was still in the country, but now with the encroachment of housing estates and the real necessity of getting more orderly general conduct in the hospital, an efficient boundary fence is essential, not so much to keep patients in, though that is important, as to prevent the precincts of the hospital becoming a promenade for the adults and a playground for the children from outside.

With the apparent increasing numbers of children patients, suitable facilities should be available for indoor and outdoor recreation. This is at present quite impossible because of lack of accommodation and because the grounds have not yet been laid out.

The corrosion of the iron pipes used for the domestic hot water supply and central heating rendered certain wards ineffective during the year. This piping requires replacement throughout the hospital.

The coke-burning stoves are not a suitable means of heating the wards, especially those used for diseases of the chest.

BOOTH HALL HOSPITAL.

By Dr. W. H. Patterson, Medical Superintendent.

STAFF.

(a) *Visiting Consultants—*

M. L. Thomson, M.A., M.D.	.. .. .	Physician
Sylvia K. Guthrie, M.D., M.R.C.P.	.. .. .	Physician
N. G. Godfrey, M.B., B.S., F.R.C.S.	.. .. .	Surgeon
W. Bryce McKelvie, M.D., CH.M., F.R.C.S., D.L.O.		Ear, nose, and throat surgeon
C. H. Cullen, M.B., B.CH., B.A.O., F.R.C.S.(I.)		
	F.R.C.S.(Eng.), M.CH.	Orthopaedic surgeon
Sydney B. Smith, M.R.C.S., L.R.C.P., D.O.M.S.		Ophthalmologist
E. Marianne Peach, M.D., D.P.H.	.. .. .	Dermatologist
G. Whitehead, M.B., CH.B.	.. .. .	Venereologist
J. Sneddon, M.B., CH.B., D.A.	.. .. .	Anaesthetist
H. P. Taylor, L.D.S.	.. .. .	Dentist
B. P. Robinson, M.B., CH.B., F.R.C.S.	.. .. .	Ear, nose, and throat surgeon
B. P. Robinson, M.B., CH.B., F.R.C.S.	.. .. .	Ear, nose, and throat surgeon
J. Sneddon, M.B., CH.B., D.A.	.. .. .	Anaesthetist
Olive M. Gimson, M.B., CH.B.	.. .. .	Anaesthetist

} *

* For the Education Committee's tonsils and adenoids surgical service.

(b) *Full time.*

W. H. Patterson, M.D., D.C.H.	.. .. .	Medical Superintendent
A. E. Buckwold, M.D., D.C.H.	.. .. .	Deputy Medical Superintendent
G. Q. Chance, B.A., M.B., B.CH., B.A.O., D.M.R.E.		Radiologist
A. A. Anscombe, M.B., B.S.	.. .. .	Resident Surgical Officer
F. Batley, B.Sc., M.B., CH.B., M.R.C.S., L.R.C.P.		House Officer
J. N. Montgomery, M.B., CH.B.	.. .. .	House Officer
A. Sless, M.B., B.CH., B.A.O.	.. .. .	House Officer
Angela Cawson, M.B., CH.B.	.. .. .	House Officer
Christina K. Lees, S.R.N., S.C.M., R.F.N.	.. .. .	Matron
H. Taylor	.. .. .	Secretary-Steward

General.

It has been possible during the year to establish a number of new developments.

A full range of Out-patient clinics with visiting specialists in attendance was begun in April. These clinics are already being used to capacity. They are still short of structural accommodation and for their efficient functioning will require additional ancillary staff, both medical and clerical.

The Physiotherapy department, closed because of lack of staff and displaced by the new laboratory extensions, has been re-housed, giving it twice its former accommodation, much additional modern equipment and re-opened fully staffed. An arrangement with Crumpsall Hospital whereby members of their staff are seconded to us in rota is working well for our mutual benefit.

During the year a Hospital School was opened, following the appointment of a Headmaster and two Assistant Teachers. Individual bedside instruction and occupational therapy is carried out on medical orders. Selected ambulatory patients attend school classes in the schoolroom in the afternoons. All ages, including "Toddlers," are catered for and much patience and ingenuity have made the school popular and effective. The whole system has proved a definite help in the therapy and recovery of the patients. In addition to their ordinary work the members of the teaching staff have rendered valuable assistance in many ways and it is a pleasure to record that they are welcomed in the wards by patients and staff alike.

The delivery of a long awaited electro-cardiograph has enabled the establishment of a fortnightly session for the work and its usefulness in research and investigation of cardiac problems has already been demonstrated.

For some years medical students have been given unofficial tuition from our clinical material. With the establishment of a University Chair in Child Health regular clinical teaching is now carried out. A number of post-graduate meetings has also been provided.

On the debit side it has to be recorded with regret that the supply of nursing staff has worsened during the year. The new premature infant unit still remains unopened for this reason. Tonsil operation work ceased entirely from August to December, 1947, because of the poliomyelitis epidemic. Its full resumption is unlikely to be possible because of staff shortages.

Statistics.

	1947
Patients treated as in-patients	5,709
Patients treated as out-patients	3,510
Patients admitted	5,423
Duration of stay (days)	19
Deaths, all ages (excluding 7 dead on admission) ..	371

Deaths.

Total deaths = 378

(1) Neonatal deaths (under 4 weeks). Total=105.

Causes :

Infantile vomiting and diarrhoea	35
Uncurable congenital defects	25
Prematurity	13
Respiratory infections	12
Neonatal sepsis	5
Birth injury	3
Miscellaneous diseases	6
Brought in dead, or died shortly after admission	6

(2) Deaths (aged 4 weeks to 1 year). Total=217.

Causes :

Primary infantile vomiting and diarrhoea	90
Secondary infantile vomiting and diarrhoea	40
Respiratory infections (pneumonia, etc.)	40
Congenital defects	16
Prematurity	5
Miscellaneous diseases	13
Brought in dead, or died shortly after admission	13

(3) Deaths (over 1 year). Total=56.

Causes :

Tuberculosis (Meningitis 14, pulmonary 5, miliary 3) ..	22
Respiratory infections	5
Rheumatic heart disease	4
Acute "abdominal" diseases (appendicitis and peritonitis 3, intestinal obstruction 3)	6
Miscellaneous diseases	19

Infectious Diseases.

The following 169 cases of infectious disease were wittingly or unwittingly admitted during the year :—

Dysentery—Sonne	27
Dysentery (other types)	9
Whooping cough	23
Chickenpox	22
Measles	73
Cerebro-spinal fever	6
Scarlet fever	5
Diphtheria	3
Malaria B.T.	1

Departments.*Casualty and After-Care Department.*

Attendances	1947		1946	
	Children	Patients Over 16 years	Children	Patients Over 16 years
First Attendances	3,310	200	2,332	262
Subsequent Attendances	7,002	116	5,091	333
Totals	10,312	316	7,423	595

	1947	1946
Patients subsequently admitted to hospital	400	343
Adult patients transferred to other hospitals	198	125
Road accidents	26	44

Surgical Department.

	1947	1946
Operations performed in theatre	1,868	2,319
General surgical emergencies	221	246

Some operation details :—

	* Performed by Consultant Staff	† Performed by Resident Surgical Officer
Pyloric stenosis	6	3
Intussusception	4	23
Intestinal obstruction from other causes	11	12
Appendicitis	42	133
Appendicitis and General Peritonitis	6	41
Osteomyelitis	6	37
Hernia	15	37
Empyema	2	2
Mastoid:—		
(i) Simple	11	37
(ii) Radical	3	—
Total	106	325

Ear, Nose, and Throat Department.

	1947	1946
Patients examined by Aurists	932	909
(In-patients 332, out-patients 600)		
Tonsils and Adenoids operations (Hospital list)	236	363
Tonsils and Adenoids Operations (Education Authority)	654	1,072
(Tonsils operations cancelled August to December inclusive).		

Ophthalmic Department.

There were 49 patients seen by the Ophthalmologist, the total attendances being 77.

Dental Department.

	In-patients	Out-patients	1947 Total	1946 Total
Patients inspected.. .. .	—	—	2,089	2,078
Patients treated	814	86	900	876
Extractions :—			284	332
Under general anaesthetic	61	16	—	—
Under N ₂ O Gas.. .. .	99	4	—	—
Under local anaesthetic	85	19	—	—
Fillings	345	30	375	261
Special gum treatments	47	14	61	81
Other conservative treatments	192	12	204	237

Of the total treatments 296 in-patients and 50 out-patients were under the age of 8 years, and 518 in-patients and 36 out-patients were over 8 years.

There has been an increase in orthodontic work in the Out-patient clinic. Six children have had orthodontic appliances constructed and fitted with satisfactory results, while 21 other children have received treatment for orthodontic defects. Two older children attending the Out-patient clinic have been provided with partial dentures.

X-Ray Department.

	In-patients	Out-patients	1947 Total	1946 Total
Patients radiographed ...	2,721	1,350	4,071	3,957
Films exposed	—	—	7,496	8,624

Physiotherapy Department.

(Closed March to October inclusive)

	In-patients	Out-patients	1947
<i>November and December :—</i>			
New patients	32	32	64
Total attendances	649	310	959
Treatments—			
Massage	556	288	844
Radiant heat and infra-red	181	240	421
Sunlight	119	—	119
Exercises	642	294	936
Electrical	164	255	419
Wax baths	13	—	13

Almoner's Department.

	1947	1946
Out-patients attendances	10,628	8,058
Convalescences arranged	129	215
Extra nourishment cases	29	118
Transport and escorts arranged	229	242
Home visits paid by Almoner	11	78
Special schooling arranged	11	16
Transfers to residential nurseries	5	64
Supply of surgical appliances arranged ..	65	—
Referred to statutory or voluntary bodies :—		
For supervision or reports	11	97
For help with appliances	2	30
For assistance with clothing	6	8
Other help arranged for 36 cases	36	126
Referred to other clinics or to District Nurses	28	52

Nursing Staff.

41 new students entered in 1947.

16 nurses left in trial period.

16 nurses left after trial period but without completing training.

24 nurses completed their training.

State Examination Results.

	Entries	Passes	Failures
Preliminary	28	23	5
Final	24	23	1

Staff Sickness.

During the year 157 nurses were off duty through illness and accident.
The total days lost = 1,429,

CRUMPSALL HOSPITAL.

By Dr. D. W. Macartney, Medical Superintendent.

STAFF.

(a) *Visiting Consultants—*

G. Q. Chance, M.B., B.CH., B.A.O., D.M.R.E.	.. Radiologist (Full-time)
C. S. D. Don., M.D., F.R.C.P.	.. .. . Physician
H. R. Donald, B.M., B.CH., M.R.C.P.	.. .. . Physician
R. W. Luxton, M.D., M.R.C.P.	.. .. . Physician
G. G. E. Smyth, M.D., F.R.C.P.	.. .. . Physician
F. H. Scotson, M.B., B.S., F.R.C.S.	.. .. . Surgeon
H. A. Haxton, M.B., CH.B., F.R.C.S.	.. .. . Surgeon
D. S. Poole Wilson, M.B., M.CH., B.A.O., F.R.C.S.	Surgeon
Mary Evans, M.D., M.R.C.O.G.	.. .. . Obstetrician and Gynaecologist
Mary E. Mills, M.B., CH.B., F.R.C.S., M.R.C.O.G.	Obstetrician and Gynaecologist
B. P. Robinson, M.B., CH.B., F.R.C.S.	.. .. . Ear, nose, and throat surgeon
D. L. Griffiths, B.SC., F.R.C.S., L.R.C.P.	.. .. . Orthopaedic surgeon
L. Wertheim, M.R.C.S., L.R.C.P.	.. .. . Dermatologist
S. B. Smith, M.R.C.S., L.R.C.P., D.O.M.S.	.. .. . Ophthalmologist
N. J. de V. Mather, M.A., M.B., CH.B.	.. .. . Psychiatrist
G. Whitehead, M.B., CH.B.	.. .. . Venereologist
H. J. Brennan, M.D., D.A.	.. .. . Anaesthetist
Olive M. Gimson, M.B., CH.B.	.. .. . Anaesthetist
Ena M. Morrison, M.B., CH.B.	.. .. . Visiting Medical Officer to Annexe
W. C. Mellor, L.D.S.	.. .. . Dentist

(b) *Full time.*

W. A. Ramsay, T.D., M.A., M.D.	.. .. . Medical Superintendent (resigned 30-11-47)
D. W. Macartney, M.D., D.P.H.	.. .. . Deputy Medical Superintendent (appointed Medical Superintendent 4-2-48)
S. Skapinker, M.B., B.CH., F.R.C.S.	.. .. . Resident Surgical Officer
Perla Greeves, B.SC., M.B., B.CH., M.R.C.O.G.	.. Resident Obstetrical Officer
Ellen Joyce, M.B., B.CH., B.A.O.	.. .. . Resident Anaesthetist
D. Mander, M.B., CH.B., D.R.C.O.G.	.. .. . Resident Assistant Obstetrical Officer
D. K. Gilmour, M.B., B.CH., B.A.O.	.. .. . Resident Assistant Anaesthetist
Sylvia N. Nabarro, M.B., CH.B.	.. .. . Senior House Officer (Medical)
C. De Largy, M.B., B.CH., B.A.O.	.. .. . Senior House Officer (Surgical)
Christine J. T. Jamieson, M.R.C.S., L.R.C.P.	.. House Officer (Maternity)
Dorothy E. M. Thomas, M.B., CH.B.	.. .. . House Officer (Maternity)
Theresa P. Lee, M.B., CH.B.	.. .. . House Officer (Medical)
F. R. L. Makin, M.R.C.S., L.R.C.P.	.. .. . House Officer (Medical)
H. L. English, M.B., B.CH.	.. .. . House Officer (Medical)
Sheila A. Costello, M.B., CH.B.	.. .. . House Officer (Medical)
J. G. Mathie, M.B., CH.B.	.. .. . House Officer (Surgical)
Eva M. Hillier, S.R.N., S.C.M.	.. .. . Matron
A. T. Sampson	.. .. . Secretary-Steward

General.

The hospital's greatest difficulty this year has been accommodation for all the patients requiring hospital treatment. Like last year the waiting list has risen to nearly 100 cases at times.

Another problem that faced the hospital during the past year was the large number of pulmonary tuberculosis cases referred for nursing. Isolation accommodation was very limited and only a few of the more urgent types were admitted.

Dr. Ramsay, the Medical Superintendent, resigned and left the hospital in December, in order to take up his appointment as Senior Administrative Medical Officer to the Sheffield Hospitals Regional Board.

An E.M.S. Neurosurgical Unit was established in the hospital during the year and this new department has caused a great increase in the work of the hospital, both in the wards and in the operating theatres.

More patients than ever attended the Consultant Out-patient Department and the pressure on the beds has been somewhat relieved in so far as these patients are investigated as Out-patients.

A Hospital Records Department, with its own staff, was started in one of the old disused wards. This has resulted in a great improvement in the filing of medical case papers.

Other additions to the Staff include a Catering Supervisor, resulting in improved hospital diets.

During the past year 13,304 patients were admitted to hospital. Of these 305 were Service patients. At the end of the year there were still 60 beds reserved for E.M.S. purposes.

Surgical Department.

The total number of operations in the operating theatres was 3,513. Of these, 1,750 operations were performed by the Visiting Staff. Emergency operations, included above, totalled 706. General classification of operations is as follows :—

Skin and superficial structures	456
Thorax and chest wall	24
Orthopaedic	204
Ductless glands	19
Hernia	274
Abdominal	784
Rectal	143
Genito-urinary	360
Dental (in main theatre)	57
Gynaecological, including Caesarean Section	985
Ear, Nose, and Throat	90
Vascular	126
Neurosurgical	91

Consultant Clinics.

Attendances at the Consultant Clinics during the year 1947 were as follows :—

	New patients	Attendances
Medical	541	1,787
Surgical	530	2,478
Gynaecological	664	1,436
Dermatological	157	979

<i>Special Departments.</i>	<i>New Patients</i>	<i>Attendances</i>
Dental	169	596
Ear, Nose, and Throat	175	526
Eye	139	283
Genito-urinary	25	257
Orthopaedic	443	1,354
Diabetic	36	697
Occupational Therapy	595	2,578
Chiropody	1	61
Out-patient dressings	331	4,396
Electro-convulsion therapy	3	68
Neurological	64	95
Psychiatric	83	109
<i>X-Ray Department.</i>		
Total number of patients examined		5,477
In-patients examined	3,770	
Out-patients examined	1,707	
Number of examinations made of above		7,155
Consisting of :—		
Alimentary Tract	724	
Renal Tract	440	
Chest	3,144	
Gall Bladder	105	
General	2,742	
Films used on these examinations		15,478
Average number of films used per examination		2.16
Screen examinations made		820
Consisting of :—		
Barium meals		627
Barium enemas		97
Chests		96
Examinations made with the Ward Mobile Unit in the Wards		389
<i>Physiotherapy Department.</i>		
<i>In-patients—</i>		
New patients		660
Attendances		23,013
Treatments		32,162
<i>Out-patients—</i>		
New patients		691
Attendances		16,190
Treatments		30,643

Almoners' Report.

The Almoners have continued to interview every out-patient and in-patient. In this way it is hoped that the patient's problems are discovered and, if possible, dealt with. Medical and Nursing staffs have been most co-operative when the Almoners have been making plans for these patients. It is felt, however, that the social problems which underlie so many of the worries and difficulties are not given sufficient emphasis in the treatment of a number of cases. In order to point out relevant social problems, social reports are being attached to medical records and it is hoped that this method will show the importance of this side of the work.

The increase in psychiatric, neurological, and neurosurgical cases has entailed detailed environmental and social information being made available by the Almoners. In this respect the Department is grateful to co-operating agencies for the valuable help they have given in building up the family history.

Another problem that still faces any social worker is the lack of certain types of homes. The three gaps of which the Almoners have been most conscious in 1947 have been the lack of accommodation for the girl requiring V.D. treatment, for the young chronic case such as disseminated sclerosis of 24, and for the old people. It is hoped that such gaps will be closed as soon as the new Health Service is an established working reality.

163 cases have been dealt with while being recommended for transfer to the Annexe. The majority of these being old people for whom relatives cannot (or will not) provide accommodation. Admirable as are the nursing facilities provided at the Annexe, many patients would appreciate the more homelike atmosphere of an old people's hostel where, if necessary, they could remain in bed for a large percentage of the time and yet be part of the social life of the hostel. This experiment has been tried and found to work, and particularly where an old patient is not necessarily bed-fast would be a welcome adjunct to our present services.

142 patients have been interviewed in the Special Ward, of these 65 were pregnant. 125 were sent back home at the conclusion of their treatment in the hospital.

The problem of the illegitimate child is also forced on our notice. 155 unmarried mothers were interviewed and 52 married women owned to illegitimate children. 47 were considering adoption, 4 babies were fostered, 19 sent to hostels run by various religious organisations, and 18 to Rose Hill Convalescent Home, the home sponsored by the Manchester Corporation. 44 of these girls were under 21 years old. This fact may well cause some concern to those interested in the welfare of young people.

The "skip" in the Almoner's Office has become well-known and the Department is grateful to friends and members of the staff who have made gifts of clothing. These have proved very helpful in fitting up people for convalescent homes and in providing clothes for those who had very little in which to go home. 30 cases have been helped in this way.

182 convalescences have been arranged at various homes in Wales, Lancashire, and Yorkshire. One of the difficulties about convalescing patients is the time lag between a patient leaving hospital and going to a convalescent home. It is felt in many quarters that a convalescent home belonging to each hospital or group of small hospitals would help in this matter. Patients could go there direct in small parties, often feeling happier because someone from the same ward would be going on the same day.

166 surgical appliances have been provided, 184 patients referred for priority supplies of milk and eggs (excluding maternity patients), 24 have been helped financially with their rent, compassionate leaves or postings have been obtained for 57 Service men, 73 patients have been referred to district nurses, 13 have been helped to obtain a pension, 55 given advice about adoption, in 41 cases the care of the children has been arranged so that the mother could be in hospital. And so the list might be continued.

The Department thanks all societies, other departments of the Corporation, Probation Officers, and Moral Welfare Workers for the willing help and advice they have given throughout the year. The list is too long to give in its entirety and to single out one or two would be invidious.

Statistics.

4,249 patients made 22,635 attendances.

204 of these were E.M.S.

3,195 patients made 8,664 attendances at the ante-natal clinic.

1,560 attendances were made at the gynaecological clinic.

1,350 attendances were made at the post-natal clinic.

£ s. d.

58 19 0 was given for Out-patient treatment.

110 2 2 claimed for appliances.

428 7 6 claimed from various Hospital funds.

£597 8 8

Casualty Department.

1,126 accident cases were attended to in the Receiving Ward, 381 of them being admitted as In-patients.

Nursing Staff.

Examination Results.

Hospital Final Examinations.	.. ..	37	successful.	3	failed.
State Final Examinations	.. ..	42	successful plus	1	trainee failed
		21	intensive course trainees.		in the whole examination.
State Preliminary Examinations.	Part I	39	successful.	3	nurses failed.
	Part II	59	successful.	1	absent,
		23	nurses successful in		Parts I and II.
Central Midwives Board Examination	Part I	45	pupils successful.	2	failed.
Housekeeping Course.	.. ..	7	pupils successful.		None failed.

Student Nurses.—during the year 87 students were admitted to the training school and 45 students completed their course.

Intensive Course Trainees.—In the period October, 1946, to October, 1947, 22 trainees were admitted, who all completed the course. One failed the State Final Examination.

LANGHO COLONY FOR SANE EPILEPTICS.

By Dr. Beresford T. Richards, Medical Superintendent.

STAFF.

Full time—

Beresford T. Richards, M.R.C.S., L.R.C.P., D.P.M.	..	Medical Superintendent
Mrs. A. J. Green, R.M.P.A. (retired 30-9-47)	..	Matron
Miss S. A. Crawley, S.R.N., S.C.M. (commenced 20-10-47)	.. .. .	Matron
H. H. Miller, M.B.E. (retired 30-11-47)	..	Secretary-Steward
H. E. Connolly, (commenced 12-2-48)	..	Secretary-Steward

On 31st December, 1947, there were maintained in the Colony 241 male and 267 female colonists, of whom 241 were chargeable to the Manchester Corporation and 267 to other Authorities, as under :—

County Boroughs.					County Councils, etc.				
Barrow-in-Furness	..	..	1		Cheshire	..	..	..	6
Blackburn	..	..	19		East Suffolk	..	..	..	2
Blackpool	..	..	7		Glamorgan	..	..	..	3
Bolton	..	..	7		Lancashire	..	..	..	125
Bootle	..	..	2		Middlesex	..	..	..	4
Bradford	..	..	1		Monmouth	..	..	..	1
Burnley	..	..	10		Surrey	..	..	..	5
Croydon	..	..	2		Yorkshire, North Riding	..	..	..	1
Ipswich	..	..	4		Yorkshire, West Riding	..	..	..	9
Lincoln	..	..	1		States of Guernsey	..	..	..	1
Liverpool	..	..	19						
Newcastle-on-Tyne	..	..	1						157
Oldham	..	..	4						
Preston	..	..	3						
Salford	..	..	24						
Wallasey	..	..	1						
Warrington	..	..	4						
					Total : 267				

The total number of epileptic seizures was 31,080.

	Severe	Slight	Total	No. of Patients	Average
Male	9,217	4,586	13,803	241	57
Female	9,380	7,897	17,277	267	62
Total	18,597	12,483	31,080	508	

Out of the above totals, two male colonists together accounted for 574 severe and 257 slight seizures, and one female colonist for 255 severe and 919 slight seizures.

The incidence of seizures has been classified as follows :—

	Males	Females
Decreased incidence	61	14
Increased incidence	52	30
No change	112	195
No seizures during the year	33	36
Unclassified (including recent admissions and non-epileptics)	19	--

21 colonists died during the year and 4 fractures occurred.

The employment of colonists on 31st December, 1947, was as follows :—

	Male	Female
Domestic—the Homes, etc.	119	153
Domestic—Administrative Block	5	25
Laundry	—	23
General Kitchen	1	12
Sewing Room	—	19
Coal Yard	7	—
Engineer's Department	3	—
Carpentry, etc.	7	—
Shoemaking	3	—
Tailoring	1	—
Office and Stores	8	—
Farm	18	—
Kitchen Garden	8	—
Grounds, Sports Field, etc.	40	—
Sick and unemployable	21	35
	241	267

The type of epileptic admitted still remains of a very poor mentality.

There has been one new Anticonvulsant drug—3, 5, 5—trimethyloxazolidine—2, 4 dione (Tridione) ; this has been used in America in the treatment of Petit Mal. It has become available in England. Practically every case that has been treated has shown marked toxic symptoms and signs. In its present form it is not considered suitable for trial at the Colony.

Transport continues to be a problem of major importance, preventing as it does the chances of recruiting staff and/or the recreation of the present staff.

The employment of part-time female staff has in part relieved the shortage of staff, but a solution of this problem has not been reached.

MONSALL HOSPITAL.

By Dr. D. C. Liddle, Medical Superintendent.

STAFF.

(a) *Visiting Consultants.*

E. S. Burt Hamilton, M.C., M.B., CH.B., F.R.C.S... Ear, nose, and throat surgeon
 W. Bryce McKelvie, M.D., CH.M., F.R.C.S., D.L.O. Ear, nose, and throat surgeon
 A. Dunlevy, M.B., B.CH., B.A.O., L.M., D.M.R.E... Radiologist

(b) *Full time—*

D. C. Liddle, M.B., CH.B.	Medical Superintendent
R. Traill, M.B., CH.B., D.P.H.	Temporary Deputy Medical Superintendent
D. Craig Lillie, M.B., CH.B., D.P.H.	Resident Assistant Medical Officer
Margaret A. Barber, M.B., CH.B.	Resident Assistant Medical Officer
J. Black, M.B., CH.B.	Resident Assistant Medical Officer
Janet B. C. Orchardson, M.B.E., A.R.R.C., S.R.N.	Matron
C. Johnson	Secretary-Steward

A study of the annual reports for the past five years shows that there has been a steady decline in the annual number of admissions. This can be attributed to two main causes, viz., Diphtheria Immunisation and the restriction placed on Scarlet Fever admissions.

The campaign for mass immunisation, which was at its height in 1940 and 1941, began to show results in 1942 when the number of diphtheria admissions dropped from an average of 963 cases for the previous three years to 768. Since then there has been an almost continuous drop culminating in 1947 in only 166 cases being admitted—the lowest yet recorded.

The restriction placed on the admission of Scarlet Fever cases has accentuated the drop in the annual admissions. This was an action necessitated by force of circumstances, viz., shortage of nursing staff, but would sooner or later have come into being on its own, in the light of present day knowledge of the bacteriology and mode of spread of infections of the Scarlet Fever type.

Scarlet Fever is, in the main, a mild disease at present and as, for some time, it has been recognised that isolation in hospital has little or no effect in the spread of this disease, hospitalisation of all cases of Scarlet Fever has become an anachronism.

At present, cases of Scarlet Fever are admitted where the severity of the disease justifies admission for treatment, or where there is some good reason for isolating the cases, *e.g.*, when cases arise in children's residential institutions, or where the patient is associated with a business dealing with food distribution, or where treatment cannot be carried out at home. The operation of the restriction is largely carried out by the general practitioner who decides whether the case shall be admitted or not. Cases requiring special treatment are not refused by the hospital.

The fall in admissions during 1947 would have been more in evidence had the country been spared the devastating epidemic of Poliomyelitis. This was reflected in the hospital admissions to the extent of no less than 278 patients who were either suffering from the disease or suspected to be so affected. Of these, fortunately, 109 were not true cases.

The large influx of these cases, occurring mainly in August and September, threw a great strain on the depleted nursing staff. To alleviate it, arrangements were made for the Senior Assistant Medical Officer of Health to examine most of the cases notified as Poliomyelitis before admission and only permitted those in whom there were good grounds for considering that the disease was Poliomyelitis to be admitted. This preliminary "screening" of patients was of inestimable value as it reduced largely the numbers of patients who would have been admitted with diseases other than Poliomyelitis.

The following sections of this report deal with the various aspects of the patients admitted, under the appropriate headings.

General.

At the close of the year 1946, 117 patients remained in hospital. During 1947, 2,173 were admitted. The total number under treatment during the year was 2,290. There were 91 deaths and 2,092 were discharged cured. 107 remained in hospital at the end of the year.

The largest total number of cases admitted to hospital was during the month of August, when 220 cases were received. The maximum number of patients in hospital was 182 on September 17th and the minimum number was 94 on December 24th.

The average daily number of patients in hospital for the year was 141.6, as against 135.1 in the year 1946.

The average duration of stay for each patient was 23.7 days, as against 23.3 days in 1946.

The fatality percentage for all cases under treatment was 4.2, as compared with 2.6 during 1946.

In 524 cases, or 24 per cent., the diagnosis was altered from the disease notified.

Scarlet Fever.

22 cases remained in hospital at the end of the previous year, and during the year 413 were admitted, showing a decrease of 36 on the previous year. The number of discharges was 421 and there were 2 deaths (1 influenzal meningitis and 1 pneumonia).

The average stay in hospital was 20.3 days, showing an increase of 0.1 days in the previous year.

Complications in Scarlet Fever.

	Number	Percentage
Rhinorrhoea in Convalescence	3	0.7
Otorrhoea (including one mastoiditis)	20	4.8
Adenitis	4	0.9

Active Immunization against diphtheria in patients admitted to Hospital suffering from Scarlet Fever.

Patients who were Schick positive were immunized against diphtheria.

Scarlet Fever Return Cases.

The number of cases of scarlet fever discharged from hospital during the year was 421. The number of true return cases for the year was 6, the return case percentage being 1·4, as against 1·3 per cent. for 1946.

The average duration of stay in hospital of cases giving rise to secondary cases was 20·2 days. The average interval elapsing between the discharge of the primary case from hospital and the onset of the disease in the secondary case was 13·8.

Diphtheria.

The number of patients admitted with diphtheria was 166 as against 400 in 1946, showing a decrease of 234. The total number under treatment was 197. There were 167 discharges and 4 deaths. The case fatality percentage was 2·3, as against 2·8 during the previous year. None of the deaths occurred in immunized patients.

52 cases out of the total were diagnosed as diphtheria carriers ; excluding these carrier cases the fatality percentage is 3·4.

The average stay in hospital of the patients who recovered was 41·6 days. and for fatal cases 6·5 days.

164 cases certified diphtheria were found to be suffering from some other disease, 3 of which proved fatal.

Laryngeal Diphtheria.

Seven cases of laryngeal diphtheria were admitted during the year. One case, in which membrane extended from the larynx to the small bronchioles and on whom tracheotomy was performed, died from the disease.

Diphtheria Cases—119.
(excluding 52 carriers)

Age Incidence	Number	Percentage	Percentage of Deaths
0—5 years	31	26·1	—
5—10 „	34	28·6	8·8
10—15 „	22	18·5	—
15—20 „	10	8·4	—
20+ „	22	18·5	—

Complications in Diphtheria.

Complication	Number	Percentage
Palatal paresis	5	4·2
Paralysis of eye muscles	2	1·7

Poliomyelitis.

During 1947, 278 patients suffering from, or suspected to be suffering from, poliomyelitis were admitted to hospital, 169 of whom were diagnosed as true cases.

Two patients were under treatment at the beginning of the year and 7 were still in hospital at the end of the year. 144 of the patients were either discharged home or transferred to other hospitals for further orthopaedic treatment. 20 patients died from the disease, 10 being males and 10 females. The fatality rate was 12·2 per cent.

The following table shows the number of patients, the percentage of the total number of cases, the number of deaths and the mortality percentage in each age group of the total 164 cases who were discharged home, transferred, or died during the year.

Age in years	No. of cases	Percentage of total cases	No. of deaths	Percentage mortality in group
0— 1	2	1·2	0	—
1— 5	56	34·2	4	7·1
5—10	34	20·8	0	—
10—15	22	13·4	3	13·6
15—20	17	10·4	3	17·6
20—25	12	7·3	3	25·0
25—30	12	7·3	4	33·3
30—35	6	3·6	3	50·0
35—40	1	0·6	0	—
40—45	2	1·2	0	—

The table shows that whereas the morbidity was highest in the younger age groups, the mortality rate increased with age.

The youngest patient was aged 3 months and the oldest 43 years. 78 were males and 86 females. 30 per cent. of the cases were over 15 years of age and 44 per cent. over 10 years. The average age of the patients was 10·9 years and of those who succumbed 18·5 years.

The mean length of stay in hospital of all cases was 34·2 days and of those who died 3·3 days. 6 died within 24 hours of admission.

All grades of severity of the disease were met with, from mild transient illness to gross generalised paralysis resulting in the death of 20 patients.

The total residual damage of the epidemic will not be assessable for the next two years or so, as some recovery may be expected up to that time. In consequence of this the terms used in the following tables require definition. "Permanent paralysis" should be interpreted merely as "Paralysis still present when the patient left this hospital." It is known that already, many patients have practically recovered following orthopaedic treatment at other hospitals.

The term "Temporary paralysis" comprises those cases where paralysis was present on admission but had resolved before the patient left hospital.

The patients included under the term "No paralysis" form a group in which no paralysis was ascertainable while in hospital. In these cases there was a history suggestive of the early phase of the disease with meningeal involvement and changes in the cerebrospinal fluid.

The following table shows the number of patients falling within each of these groups (deaths are not included).

No paralysis	22	} 122
Temporary paralysis	.. .. .	31
Permanent paralysis	.. .. .	91

Of the 91 cases showing permanent paralysis 24 had eventually cleared up sufficiently to be discharged home, under the care of their own medical practitioner or were referred for out-patient treatment elsewhere, while the remaining 67 were transferred to other hospitals.

As much of the treatment of poliomyelitis is of an orthopaedic nature, an orthopaedic surgeon was appointed, on a sessional basis, to advise on any orthopaedic problems which occurred in the patients. This appointment served the further purpose of providing continuity of treatment, as the surgeon was a consultant at the children's hospital to which most of the cases were transferred.

In the 122 patients showing some degree of paralysis, and the 20 deaths, the following table shows their distribution according to the part of the nervous system affected by the disease.

Spinal	91	} 142
Bulbar	.. .. .	15
Spinal and Bulbar	.. .. .	36

128 of these cases showed meningeal involvement. The most frequent site of paralysis was the limbs and in no fewer than 118 out of the 142 showing paralysis one or more limbs was involved. 57 had limb paralysis alone while 61 had, in addition, paralysis elsewhere.

The following tables show the number and site of limbs involved in (1) the 57 cases with limb involvement alone and (2) the 61 cases with limb and other paralysis.

(1)	1 upper limb	8	1 upper and 1 lower	4	} 57
	2 ,, limbs	.. .. .	1	1 ,, 2 ,,	.. .. .	5
	1 lower limb	.. .. .	25	2 ,, 1 ,,	.. .. .	0
	2 ,, limbs	.. .. .	9	2 ,, 2 ,,	.. .. .	5
(2)	1 upper limb	12	1 upper and 1 lower	2	} 61
	2 ,, limbs	.. .. .	3	1 ,, 2 ,,	.. .. .	4
	1 lower limb	.. .. .	8	2 ,, 1 ,,	.. .. .	2
	2 ,, limbs	.. .. .	10	2 ,, 2 ,,	.. .. .	20

The frequency with which the various parts of the body showed paralysis is shown in the table below.

Limbs	.. .. .	118	Back	.. .. .	18	Neck	.. .. .	9
Eye	.. .. .	33	Abdomen	.. .. .	18	Palate	.. .. .	8
Chest	.. .. .	25	Bladder	.. .. .	18	Pharynx	.. .. .	8
Face	.. .. .	20	Tongue	.. .. .	9	Jaw	.. .. .	4

Difficulty with bladder and bowel movements before and immediately after admission was quite a frequent occurrence although in the case of the latter it was almost impossible, in most cases, to distinguish between febrile constipation and bowel paresis. In one particular case complete bowel stasis was present for 9 days and partial for a further ten.

Paralysis of the respiratory muscles, in addition to paralysis elsewhere, was present in all of the twenty patients who died.

Of the 15 patients who showed bulbar involvement alone, the following muscle palsies occurred:—5 facial, 4 ocular, 3 palatal, 1 facial and ocular, 1 facial and palatal, and 1 facial, tongue and jaw. Most of these conditions had cleared up before the patients left hospital.

Enteric Fever Group.

In hospital at commencement of year	.. .. .	2
Admitted during the year	.. .. .	16
Incorrectly diagnosed	.. .. .	8
Remaining in hospital at end of year	.. .. .	1
Discharged	.. .. .	8
Died (Typhoid Fever)	.. .. .	1
Average day of disease on admission	.. .. .	13·3rd
Average stay in hospital	.. .. .	56·7 days
Average age of patients	.. .. .	32 years

The type of disease in the cases diagnosed as enteric fever was :—

Typhoid	.. .. .	7 cases
Paratyphoid A	.. .. .	1 case
Paratyphoid B	.. .. .	1 case

The organism from the case of paratyphoid A was found to be of an undetermined *Salmonella* type at the *Salmonella* Research Laboratories. The patient suffering from this infection had probably acquired it in Portugal, when on a cruise in the Mediterranean.

Erysipelas.

61 cases were admitted and 55 were discharged. There was 1 death, due to aortic stenosis and pleurisy with effusion.

There were 16 cases notified as erysipelas in which the original diagnosis had to be amended. Most of these were other skin diseases.

Measles.

216 cases of measles were admitted during the year 1947, and 231 were discharged. Eight deaths occurred, giving a case fatality percentage of 3·3. 31 cases were complicated by broncho-pneumonia. The causes of death in the fatal cases were broncho-pneumonia (6), gastro-enteritis (1), encephalitis (1).

Whooping Cough.

194 cases of whooping cough were admitted during 1947 as against 169 in the previous year. 189 were discharged and there were 8 deaths, giving a case fatality percentage of 4.1, as against 9.1 per cent. in 1946.

The cause of death in the fatal cases was as follows:—

Broncho-pneumonia	2
Convulsions	2
Gastro-enteritis and broncho-pneumonia	2
Gastro-enteritis	1
Pneumonia with collapse of lung	1

The average age of fatal cases was 11 months.

Cerebro-Spinal Fever.

11 cases of meningococcal meningitis were treated during the year. Nine cases recovered and 2 died. The deaths took place within 48 hours of admission.

	Total Cases	Male	Female	Died	Recovered	Case Mortality per cent	
						Total	Excluding Deaths in 48 hours
Under 1 year	1	1	—	—	1	—	—
1 to 5 years	3	1	2	1	2	33.3	—
5 „ 10 „	2	1	1	1	1	50.0	—
10 „ 20 „	2	2	—	—	2	—	—
20 and over	3	2	1	—	3	—	—
	11	7	4	2	9	18.2	—

Table showing Numbers of Various Diseases Treated.

	Remaining in hospital, 1st January, 1947.	Admitted	Discharges and deaths	Remaining in hospital, 31st December, 1947
Scarlatina	22	413	423	12
Diphtheria and Diphtheria Carriers	31	166	171	26
Enteric Fever Group	2	8	9	1
Erysipelas	1	61	56	6
Puerperal Fever and Pyrexia ..	7	207	206	8
Measles	23	216	239	—
Whooping Cough	15	194	197	12
Other Diseases	16	908	882	42
Total	117	2,173	2,183	107

Post-Mortem Examinations.

59 post-mortem examinations were performed.

Aural Report.

The total number of cases of otitis media treated in the hospital during 1947 was 89 ; many of these were suffering from this condition on admission.

The following table shows the distribution of the cases of otitis media :—

	Total	Unilateral	Bilateral
Scarlet Fever	31	21	10
Diphtheria	6	3	3
Measles	19	8	11
Whooping Cough, Chickenpox, and Miscellaneous ..	33	17	16
	89	49	40

One mastoidectomy was performed, in a case of mastoiditis following scarlet fever.

Puerperal Unit.

At the beginning of the year 7 patients were still under treatment in the puerperal unit. During the year 207 patients were admitted for treatment of abnormal conditions arising in the puerperium or in association with abortion. 201 patients were discharged and 5 deaths occurred during the year. The mortality percentage was 2·40 as against 2·2 per cent. during the previous year.

Of the 206 patients discharged or died during the year the incidence of the various types of disease is shown in the following table :—

Puerperal sepsis	84
Puerperal pyrexia	32
Septic abortion	50
Incomplete abortion	31
Simple abortion	2
Threatened abortion	2
Inevitable abortion	1
Carneous mole	1
Menorrhagia	1
Chorion epithelioma	1
Dysmenorrhoea	1

In the 84 cases of puerperal sepsis the following complications were present :—

Thrombosis of jugular vein	..	..	..	..	..	..	1
Phlegmasia alba dolens	..	..	..	..	..	..	10
Pulmonary embolism	..	..	..	..	..	..	7
Pelvic abscess	..	..	..	..	..	..	1
Pelvic cellulitis	..	..	..	..	..	..	1
Mastitis	..	..	..	..	..	..	3
Scarlet Fever	..	..	..	..	..	..	1
Broncho-pneumonia	..	..	..	..	..	..	1
Bronchitis	..	..	..	..	..	..	1
Abscess of thigh	..	..	..	..	..	..	1
Abscess of hips	..	..	..	..	..	..	1
Extensive perineal lacerations	..	..	..	..	..	..	5
Haemothorax	..	..	..	..	..	..	1
Cystitis	..	..	..	..	..	..	1
Septicaemia	..	..	..	..	..	..	1
Syphilis	..	..	..	..	..	..	2
Herpes labialis	..	..	..	..	..	..	1
Uterine fibroid	..	..	..	..	..	..	1
Enteritis	..	..	..	..	..	..	1
Tonsillitis	..	..	..	..	..	..	2
Scabies	..	..	..	..	..	..	1
Urticaria	..	..	..	..	..	..	1
Intestinal haemorrhage	..	..	..	..	..	..	1
Conjunctivitis	..	..	..	..	..	..	1

Eight patients required a general anaesthetic for manual removal of retained placental tissue.

Puerperal Pyrexia.

The following table shows the cause of the pyrexia in the 32 cases of Puerperal Pyrexia admitted :—

Mastitis	..	..	..	..	..	..	..	..	..	13
Rh. incompatibility	..	..	..	..	..	..	..	..	..	1
Erysipelas of breast	..	..	..	..	..	..	..	..	..	1
Bronchitis and albuminuria	..	..	..	..	..	..	..	..	..	1
Bronchitis, asthma, and prolapse of uterus	..	..	..	..	..	..	..	..	..	1
Cystitis	..	..	..	..	..	..	..	..	..	1
Pyelitis	..	..	..	..	..	..	..	..	..	2
Measles	..	..	..	..	..	..	..	..	..	1
Eclampsia and bacilluria	..	..	..	..	..	..	..	..	..	1
Tuberculous meningitis and pulmonary tuberculosis	..	..	..	..	..	..	..	..	..	1
Phlebitis	..	..	..	..	..	..	..	..	..	1
Lobar pneumonia	..	..	..	..	..	..	..	..	..	1
Subinvolution of uterus	..	..	..	..	..	..	..	..	..	3
Parotid abscess	..	..	..	..	..	..	..	..	..	1
Ovarian cyst	..	..	..	..	..	..	..	..	..	1
Bacilluria	..	..	..	..	..	..	..	..	..	1
Tonsillitis	..	..	..	..	..	..	..	..	..	1

Incision and drainage for Breast Abscesses was performed in 2 cases.
Incision for Parotid abscess in 1 case.

Septic Abortion.

In the 50 cases suffering from Septic Abortion, the following complications occurred :—

Pelvic abscess	3
Pelvic cellulitis	2
Pulmonary embolism	1
Pyelitis	1
Pyo-salpinx	1
Phlegmasia alba dolens	1
Broncho-pneumonia	1
Eczema of hands and feet	1
Urticaria	1
Pneumonia	1
Secondary anaemia	3
Herpes facialis	1
Ulcer right elbow	1
Phlebitis	1
Measles	1

23 patients had a general anaesthetic and digital removal of retained products of conception was performed. 4 had removal without anaesthetic.

Incomplete Abortion.

Of the 31 patients suffering from this condition, 25 had a digital removal performed for retained products, 24 requiring a general anaesthetic.

The following conditions were present in the 5 cases who died following puerperal and abortal conditions :—

- (1) Puerperal Pyrexia : Tuberculous Meningitis and acute Miliary Tuberculosis.
- (2) Puerperal Sepsis : Septicaemia and Intestinal Haemorrhage. Died within 12 hours of admission.
- (3) Puerperal Sepsis : Septicaemia ; Pleural Effusion and Pelvic Peritonitis. Died within 12 hours of admission.
- (4) Puerperal Sepsis : Bilateral Phlegmasia Alba Dolens ; Pulmonary Embolism.
- (5) Septic Abortion : Septicaemia ; Pleural Effusion and Generalised Peritonitis. Died within 12 hours of admission.

Laboratory Report.

Microscopical Examination of Cultures for C. Diphtheriae.

Source of Swab	Loeffler Culture Media		Tellurite Culture Media	
	Number Examined	Positive	Number Examined	Positive
Throat	4,094	251	150	59
Nose	4,070	146	125	41
Ears	76	7	12	5
Miscellaneous	32	1	1	—
	8,272	405	288	105

A list is appended of the various specimens examined in the laboratory :—

Faeces 911

Urine—

Microscopical examination 263

Cultural examination 554

Chemical examination 209

Cerebro-spinal fluid—

Microscopical examination 762

Cultural examination 492

Chemical examination 757

Pus—

Microscopical examination 68

Cultural examination 68

Sputum 68

Cervical swabs 45

Vaginal swabs 259

Blood cultures 219

Blood counts, cell counts, and differential 1,866

Blood sedimentation rate 494

Agglutinations 104

Direct smears 243

Throat swabs (for haemolytic streptococci) 520

Effusions 15

Miscellaneous 1,273

Total 9,190

Cultures examined 9,070

Specimens examined 9,190

Total 18,260

Immunisation of Nursing Staff.

37 members of the nursing staff were Schick tested. Three of these were found to be positive and were immunised against diphtheria.

38 members of the nursing staff were Dick tested. Seven who were positive were immunised against scarlet fever.

10 nurses developed other infectious diseases, viz.: 5 Enteritis, 2 Rubella, 1 Chickenpox, 1 Mumps, 1 Disseminated Encephalo-myelitis.

WITHINGTON HOSPITAL.

By Dr. J. M. Greenwood, Medical Superintendent.

STAFF.

(a) Visiting Consultants—

D. R. Allison, M.D., M.R.C.P.	.. ..	Physician
E. S. Brentnall, M.B., CH.B., F.R.C.S.	.. ..	Orthopaedic surgeon
T. H. Chadwick, M.B., CH.B., D.A.	.. ..	Anaesthetist
H. T. Cox, M.A., M.D., F.R.C.S.	.. ..	Surgeon
R. Ellis, M.D., F.R.C.P.	.. ..	Physician
A. Hillyard Holmes, M.D., F.R.C.P.	.. ..	Physician
F. Janus, B.Sc., M.D., M.R.C.S.	.. ..	Ophthalmologist
J. H. Kellgren, M.R.C.P., F.R.C.S.	.. ..	Surgeon (Honorary)
E. H. Kitching, M.D., M.R.C.P., D.P.M.	.. ..	Psychiatrist
K. I. Liebert, M.B., F.R.C.S., M.R.C.O.G.	.. ..	Obstetrician and gynaecologist
Thomas Moore, M.D., M.S., F.R.C.S.	.. ..	Surgeon
R. Newton, M.D., M.R.C.O.G.	.. ..	Obstetrician and gynaecologist
W. A. B. Nicholson, B.Sc., M.B., F.R.C.S.	.. ..	Surgeon
J. S. Parkinson, B.Sc., M.B., M.R.C.P., D.P.H.	.. ..	Physician
Judith E. M. Savatard, M.B., B.S., M.R.C.S., L.R.C.P.	.. ..	Dermatologist
C. E. Sykes, M.B., CH.B., D.A.	.. ..	Anaesthetist
Douglas Wain, O.B.E., L.D.S.	.. ..	Dental surgeon
N. A. J. Young, M.B., CH.B., F.R.C.S.	.. ..	Ear, nose, and throat surgeon

(b) Full time—

J. M. Greenwood, M.D., D.P.H.	.. ..	Medical Superintendent
J. Carson, M.D., M.R.C.P., D.P.H., D.C.H.	.. ..	Deputy Medical Superintendent
A. A. Dunlevy, M.B., B.Ch., B.A.O., D.M.R.E.	.. ..	Radiologist
Louis Stent, M.D., DIPL.BACT.	.. ..	Pathologist
N. F. Kirkman, M.D., F.R.C.S.	.. ..	Resident Surgical Officer
T. H. Lawton, M.B., CH.B., L.F.P.S., M.R.C.O.G.	.. ..	Resident Obstetrical Officer
K. M. Rains, M.R.C.S., L.R.C.P., D.A.	.. ..	Senior Anaesthetist
K. V. Lodge, M.B., CH.B.	.. ..	Clinical Pathologist
H. E. Bach, M.D. (Vienna)	.. ..	Orthopaedic Officer
W. F. Rogers, B.A., M.D.	.. ..	Assistant Medical Officer
R. Spencer, B.Sc., M.B., CH.B.	.. ..	Assistant Surgical Officer
K. D. G. Abbott, M.R.C.S., L.R.C.P.	.. ..	Assistant Obstetrical Officer
Annie Cross, M.B., CH.B.	.. ..	House Officer
Dorothy R. Davies, M.B., CH.B.	.. ..	House Officer
G. Fairclough, M.B., CH.B.	.. ..	House Officer
J. B. Fletcher, M.B., CH.B.	.. ..	House Officer
Thelma B. Hoyle, M.B., CH.B.	.. ..	House Officer
W. Lees, M.B., CH.B., L.R.C.P., M.R.C.S.	.. ..	House Officer
J. Nagington, M.B., CH.B.	.. ..	House Officer
Roberta A. Stewart, M.B., CH.B.	.. ..	House Officer
Margaret Tate, M.B., CH.B.	.. ..	House Officer
Betty Thomas, M.R.C.S., L.R.C.P.	.. ..	House Officer
E. F. Barber, F.H.A.	.. ..	Secretary-Steward
Jessie Rhodes, S.R.N., S.C.M.	.. ..	Matron

General.

The scope and amount of work done in the hospital shows an increase over the previous year. The difficulties common to most hospitals were encountered, in which the chief were delay in starting new building work or structural alterations, and the shortage of nursing staff.

The absence of certain buildings led to improvisation in order to provide facilities which were urgently needed and within the limitations imposed by these adaptations the necessary services to the public were given. An instance of this improvisation might be cited in that approximately 10,000 new out-patients were seen and more than 37,000 attendances were recorded in a unit which had been approved for conversion to an out-patient block, but in which no work had been started at the close of the year.

The difficulties created by the shortage of nursing staff were partially overcome by utilising the existing staff to the best advantage. An increased use was made of part-time nursing staff who came for varying periods of the day or week and as a result of this additional wards were opened. Unfortunately, this staff is, on the whole, not able to work over the week-ends and difficulties were experienced in staffing wards at these periods. The part-time staff are, however, suited to out-patient work as the clinics in this section of the hospital are held at fixed hours during week-days. Increased out-patient facilities were, therefore, provided, as by the use of these clinics examinations and investigations can be done for patients which save them spending several days in hospital and thus the need for nurses on the wards is reduced.

An intensive course of training for ex-service nursing orderlies was commenced in February and resident accommodation was provided for this group of students. The females were accommodated in the Nurses Home, but there were 23 male student nurses among the group and the Cottage Ward was adapted for use as a hostel for this staff. The Ministry of Health were responsible for the expenditure. The nurses take one year for training, which is chiefly theoretical, but they do practical nursing on the wards and assist in staffing the hospital.

A reorganisation of the specialist staff was approved by the Council during the year and as from July an increased staff was made available for the patients. Additional specialist staff necessitated an increased resident house officer staff, additional accommodation, and clerical staff. These requirements were most difficult to meet, particularly in regard to the resident medical staff whose accommodation was designed to house 8 in the year 1934 when previous reorganisation of medical staff took place. The resident staff now number 20 and as no additional building has taken place during the past 13 years doctors are housed in temporary accommodation in various parts of the hospital.

The medical records of the hospital have received considerable thought during the past few years and for the first complete year a unified records department was established. Minor alterations are necessary to some buildings and equipment is badly needed, but during the year much valuable work was done in the unit.

The Catering services of the hospital were also improved, owing largely to the appointment of a Catering Supervisor, who is responsible for the general control of all matters related to the feeding of patients and staff. Food containers for the delivery of meals from the kitchens to the wards were ordered and a number were received.

The total number of patients admitted to the hospital during the year was 11,144 of whom 65 were military. The total number of patients discharged was 10,096 (military 93) and the total number of deaths was 1,038 (military 3). The number of recorded out-patients seen for the first time was approximately 12,000 and the number of recorded visits of out-patients to the different sections of the hospital totalled 79,886.

Medical Department.

Towards the end of January patients suffering from pulmonary tuberculosis were transferred to Baguley Sanatorium and the hospital ceased to maintain wards allocated for the treatment of this condition. Student nurses at the hospital are, however, seconded to Baguley Sanatorium for three months during their period of training.

The City Council approved a plan for the hospital to co-operate with the University in a Rheumatism Research Scheme to be established in the City. Some beds are to be made available in this hospital for the treatment of certain types of rheumatism and specialist staff will direct treatment and research. The work had not commenced at the end of the year, but it is expected to function early in the new year.

A medical psychiatrist was appointed to the staff of the hospital in June. There is considerable need for this type of service which cares for the border line case of mental illness not sufficiently severe to need mental certification and yet sufficiently serious to need in-patient hospital treatment. The results of treatment in these cases have been most satisfactory.

Surgical Department.

An increased staff resulted in increased work and difficulty was found towards the end of the year in regard to operating theatre accommodation. Ten years ago when the new operating theatre suite was completed, the total number of operations performed in the hospital was 2,657, whereas during the past year the number of operations totalled 3,878, and this work is being done in the same space.

It has been agreed that a Regional centre for maxillo-facial surgery shall be established at the hospital, but no building work had been started at the end of the year. When it is found possible to build, the scheme provides for the alteration of one of the operating theatres, converting this from one in which minor operations and plasters only are done to one in which major operations can be performed. These alterations will assist in finding accommodation for the increased operative work of the hospital.

The following table shows the number of operations done in different categories of surgery during the year :—

	1947	1946
General surgery	1,950	1,679
Orthopaedic	327	320
Gynaecological	799	788
Ear, nose, and throat	195	152
Midwifery	29	47
Accidents	578	415
	<hr/> 3,878 <hr/>	<hr/> 3,401 <hr/>

Obstetrical Department.

The shortage of midwifery staff continued during the year and during some of the early months great difficulty was experienced in staffing the wards. Many patients had to be refused admission to hospital on account of lack of nursing staff, but no patient was refused who suffered from a complicated pregnancy or a pregnancy in which difficulty was likely to be experienced.

Provision was made during the current year for the erection of glass and steel partitions in one ward in order to give increased privacy to patients, together with improvements to the labour room with the same object in view, and also alterations to the sterilising plant and sanitary accommodation. No work had been started on these schemes at the end of the year.

The following tables summarise briefly the work done in the department.

Patients who attended the clinics.

	Sessions	Attendances
Ante-natal Clinic	272	9,780
Post-natal Clinic	50	1,250

Patients admitted to hospital.

	From the Clinic	Emergencies	Total
For ante-natal treatment	693	78	771
For delivery	1,743	174	1,917
	2,436	252	2,688

Mothers.

Medical aid was sought during delivery on 843 occasions and the following procedures were carried out :—

Repair of the perineum	464
Instrumental delivery	103
Surgical induction of labour	90
Breech delivery—by doctor	34
—by midwife	37
	71
Caesarian section	28
Twin delivery	33
External version	48
Blood transfusion	41
Manual removal of placenta	38
Internal version	10
Episiotomy performed	162

There were 6 maternal deaths.

There were 52 notified cases of Puerperal Pyrexia.

Babies.

Number of live births

Full time	1,676
Premature	198
	1,874

Number of still births—

Full time	33
Premature	43
	76

Total births 1,950

Number discharged from hospital—

Full time	1,634
Premature	122
	1,756

Of this number 1,701 were totally breast fed=96 per cent.

Number of deaths—

	Under 10 days	Over 10 days	Total
Full time	19	23	42
Premature	56	20	76
	75	43	118

Consultation Clinics.

The object of these clinics is to provide specialist advice and to refer patients for treatment to the appropriate section of the health service, which may be a general practitioner or hospital. All these clinics are run on the appointment system so that each patient is given a definite time and date for his appointment. As recorded elsewhere the clinics are working under great difficulty as no real provision has been made as yet for this type of work. The number of new patients seen at the clinics numbered 3,668 and there was a total of 18,226 attendances. This shows an increase of 1,050 new patients over the previous year. Details of the attendances at each type of clinic are given below :—

<i>Clinic</i>	<i>New patients</i>	<i>Total attendances</i>
Medical	1,121	2,524
Surgical	1,092	2,054
Gynaecological	539	804
Orthopaedic	511	11,757
Ear, nose, and throat	405	1,087
Total	3,668	18,226

Accident Department.

Patients attending for the first time are seen in the combined Accident and Admission Department. If further attendances are needed the patients attend the Out-patient Department.

The number of patients seen was :—

	1947	1946
New patients	6,492	4,991
Total attendances	19,266	16,249

X-ray Department.

New apparatus was bought during the year and this resulted in greater efficiency and better treatment for the patients.

	1947	1946
Out-patients	5,562	4,616
In-patients	4,103	3,789
	9,665	8,405

An analysis of the type of examination is shown in the following table :—

	1947	1946
Barium Meal	700	621
Barium Enema	134	129
Chest	2,443	2,132
Excretory Pyelogram	200	187
Cholecystogram	168	683
Bone and Joint	5,286	4,553
Pregnancy	234	—
Straight Renal	207	—
Mastoid and Sinus	149	—
Miscellaneous	144	100
	9,665	8,405

Physiotherapy Department.

Approval was given and financial provision made for increased accommodation for this department during the financial year and this involved the establishment of a training school for physiotherapists. Work had not started at the end of the year and, with the increase of staff which we were able to obtain, considerable congestion of patients occurred in the existing buildings.

New patients treated :—

	In-patients	Out-patients	Total
1947	664	2,383	3,047
1946	494	1,972	2,466

Attendances and treatments :—

	Attendances			Treatments		
	In-patient	Out-patient	Total	In-patient	Out-patient	Total
1947 ..	6,732	25,802	32,534	9,706	47,250	56,956
1946 ..	6,667	27,406	34,073	9,197	38,305	47,502

Ward classes were held for bed patients and in the 90 classes held during the year 1,216 patients received treatment.

The type of work done in the department is shown in the following table :—

	Treatments given		Total
	In-patient	Out-patient	
Massage	2,819	11,747	14,566
Radiant Heat	2,102	23,099	25,201
Electricity	1,098	4,531	5,629
Swedish Remedial	3,425	7,139	10,564
Artificial Sunlight	262	734	996
	9,706	47,250	56,956

Resident Staff.

A comprehensive health service is available for the resident staff and as part of this service routine medical examinations are carried out. By these means early preventive treatment of tuberculosis and other diseases is possible. During the year there were 1,154 attendances at the staff clinic and 144 members of the staff were warded for treatment.

The hospital is accepted as a training school for many purposes and students were accepted in several departments. The greatest number of students are nurses and during the year examination results were :—

	entered	passed
State Final Examination	34	33
Central Midwives Board (Part I.)	33	30

Almoners' Department.

There were a few changes in the staff during the year and at the close of the year 4 Almoners were employed.

Difficulty was found in finding suitable office accommodation and various temporary structures were used.

3 students from the Institute of Almoners received part of their training in the department during the year and two University Social Science students also attended the department.

The work of the almoners covered all aspects of social help. Arrangements were made for 126 people to have convalescent home treatment, 105 patients to obtain surgical appliances, and 62 patients to find suitable work.

Many patients were helped in regard to housing accommodation, the care of children, clothing and extra nourishment, and financial help was given to patients through various agencies. Home visits were made on 60 occasions by the almoners.

Liaison was maintained in regard to special groups of patients such as probation cases and family welfare cases, together with certain problems dealt with by the N.S.P.C.C.

The maternity section of the hospital required a considerable amount of work and 180 single women, 64 divorced and separated women, and 12 widows, having illegitimate babies were helped. Contact was maintained through various Public and Voluntary Associations to assist these patients both before and after confinement.

A handicraft teacher was employed during the year who helped to maintain the morale of patients suffering chiefly from orthopaedic, psychiatric, and chronic illnesses.

The sum of £2,073 17s. 5d. was obtained from grants from hospital funds, out-patient donations, surgical appliances, motor accident claims, and other sources.

ROSE HILL HOME, NORTHENDEN.

By A. Hartley, F.H.A., Secretary-Steward.

STAFF.

(a) *Full time—*

A. Hartley, F.H.A.	Secretary-Steward
Agnes M. Matthews, S.R.N., S.C.M.	Matron

(b) *Part time—*

Peter Moran, M.D. (retired 21-10-47)	Visiting Medical Officer
E. Philbin, M.R.C.S., L.R.C.P.	Visiting Medical Officer
(appointed 22-10-47)	

During the year 343 patients were admitted and 310 discharged. Included in the admissions were 40 mothers and new born babies. 19 of the babies were subsequently adopted. The average number of beds occupied during the year was 51.65, an increase of 8 over last year.

191 cases were nursed and treated in the Home (including 40 post-natal cases), *e.g.*, colds, cuts, sores, etc.

Bacteriological specimens sent to the Public Health Laboratory for examination numbered 48.

Negative results	44	
Positive P. Morgani diarrhoea ..	3	} Transferred to hospital for treatment
Positive Sonne dysentery	1	

The following cases were transferred to hospital for treatment :—

Measles	39	Tonsillitis	7
Chickenpox	1	Scabies	2
Respiratory catarrh ..	15	Spastic p. L. leg	1
Broncho pneumonia ..	1	Mastoid	1
Gastro enteritis	29	Hyperpyrexia	7
Bronchitis	7	Epistaxis	1
Convulsions	2	Pyloric stenosis c.—	
Gingivitis	1	persistent vomiting ..	1
Mumps	1	Epilepsy	1
Mental condition—for observation	1		

Seven A.P.T. injections were given at the Home.

The recruitment of nursing staff has still been difficult but eased towards the end of the year.

There has again been rather a high rate of sickness amongst the staff which resulted in a loss to the Home of 540 days for the non-resident staff and 202 days for resident staff.

A new system of central heating has been installed throughout the Home.

DR. GARRETT MEMORIAL HOME.

By H. Fisher, Secretary-Steward.

STAFF.

Full time—

H. Fisher.. .. .	Secretary-Steward.
Florence E. Ray, S.R.N., S.C.M. ..	Matron.

On 1st January, 1947, 58 children were in residence. The total number of admissions during the year was 358, a decrease of 6 as compared with the previous year. Discharges numbered 332, a decrease of 48 as compared with the previous year.

The number remaining on 31st December, 1947, was 84, an increase of 26 as compared with the same date in 1946.

The following is a summary of the diagnoses prior to admission :—

Debility	187
Anaemia	30
Diseases of the respiratory system ..	58
Chorea	9
Rheumatic and Cardiac Disease	16
Otitis Media	3
Post Appendectomy	2
Miscellaneous	53
	<hr/> 358 <hr/>

Of the 332 children discharged, 297 were marked "fit," 26 "improved," and 9 required further hospital treatment. 314 gained weight, 16 remained stationary, and 2 lost weight.

During residence approximately 325 children received nursing treatment for the following :—

Coryza and coughs 39	Septic sores, boils, stytes, etc. 58
Pyrexia and sore throat .. 47	Measles 8
Tonsillitis and enlarged tonsils 9	Whooping cough 1
Influenza 1	Rubella 18
Pneumonia 3	Parotitis 7
Rheumatism 2	Abdominal pains 1
Asthma 9	Diarrhoea and vomiting .. 6
Heart condition 2	Threadworms 19
Earache and aural discharges 5	Relaxed stools 15
Conjunctivitis and blepharitis 10	Nocturnal enuresis 5
Eczema, herpes and impetigo 8	Abrasions 13
Scabies 7	Miscellaneous 25

The recruitment of nursing staff was again very poor and it has not been possible to maintain the full number of children.

The reorganisation of the main kitchen was completed within the year and is a decided improvement.

Gifts of food from overseas have again been a great asset.

PARK HOUSE, CRUMPSALL.

By H. Ellis, Master.

STAFF.

Full time—

W. A. Ramsay, T.D., M.A., M.D.	Medical Officer (resigned 30-11-47)
D. W. Macartney, M.D., D.P.H.	Medical Officer (appointed 4-2-48)
J. W. Burns, M.B., B.CH., B.A.O.	Resident Assistant Medical Officer (Mental Wards)
H. Ellis	Master
Miss S. Beardshaw, S.R.N., S.C.M.	Matron

There has been an acute shortage of nursing staff throughout the year, especially in the female mental and chronic sick wards, admissions to the mental wards having to be limited.

The laundry has also been very understaffed.

During the year 510 patients (258 males and 252 females) were admitted into the mental wards as compared with 566 for the previous year.

Recreational and entertainment facilities in the form of dancing, pictures, football, cricket, outings, etc., for the patients have been well maintained and very much appreciated. The occupational centre holds daily classes, is well attended, and is turning out some useful articles, some of which are used to brighten the wards.

The nursing of sick inmates who require treatment is still being carried out in the Institution and a number of chronic sick patients from Crumpsall Hospital is also being nursed.

Aged and infirm persons admitted numbered 408, an increase of 78 compared with last year.

The appointment of a Psychiatric Social Worker to the mental wards, has proved a great advantage to the medical staff, by her investigation of the patients' personal, social, and family history, also in after-care work done by visits to selected cases for periods varying from two to six months, when patients are encouraged to discuss their personal problems; contacts are made with various social agencies when it is considered that they may be able to facilitate the patient's readjustment and assist in minimising the possibility of a further breakdown.

The dietary of the inmates and patients has been well varied, plentiful, and well cooked; the dining rooms have been regularly visited during meal-times.

There is still a number of patients in the Institution from Great Yarmouth, London, and Salford.

The health of the inmates and patients has been good. There has been no outbreak of infectious or contagious disease.

Mental Wards.

	Male	Female	Total
Remaining on 31st December, 1946	208	217	425
Admitted	258	252	510
Discharged (recovered or improved)	99	118	217
Discharged otherwise	110	96	206
Deaths	73	43	116
Remaining on 31st December, 1947	184	212	396
Average daily number under treatment	203	221	424

Monthly Incidence of Admissions.

	Male	Female	Total
January	20	13	33
February	20	14	34
March	21	22	43
April	23	24	47
May	26	34	60
June	17	21	38
July	27	22	49
August	23	22	45
September	19	19	38
October	19	16	35
November	27	26	53
December	16	19	35
	258	252	510

Discharges.

	Male	Female	Total
Within 3 days	42	18	60
Under 17 days	131	93	224
Under 4 weeks	4	22	26
Under 3 months	18	44	62
Over 3 months	14	37	51
Total	209	214	423

Deaths.

	Male	Female	Total
Within 3 days	1	3	4
Under 17 days	22	11	33
Under 4 weeks	8	2	10
Under 3 months	9	5	14
Over 3 months	33	22	55
Total	73	43	116

Ages of Persons Admitted.

	Under 20 years	20—30	30—40	40—50	50—60	60 years and over
Males	8	43	50	44	33	80
Females	10	27	39	66	40	70

Patients receiving the following treatments.

Electric convulsant treatment	18 males	34 females
Narcotic analysis	4 males	2 females
Leucotomy	3 males	0 females

WITHINGTON INSTITUTION.

By Ernest F. Barber, Master.

STAFF.
Full time—

J. M. Greenwood, M.D., D.P.H.	Medical Officer
Ernest F. Barber, F.H.A.	Master
Catherine Robertson, S.R.N.	Matron

The premises at the end of the year were occupied as follows :—

	Beds	Patients
FOR CHRONIC SICK.		
<i>Females—</i>		
3 Pavilions (9 wards)	383	366
2 Infirm wards	68	66
<i>Males—</i>		
2 Pavilions (6 wards)	286	270
Extra beds	3	—
	740	702
FOR AMBULANT PATIENTS.		
1 Pavilion for males	106	73
Totals	846	775

Not in use and due for reorganisation.
2 Pavilions (6 wards) 202 beds

Under the Five-Year Plan it was intended that these two pavilions should be converted to provide additional accommodation for chronic sick patients and further accommodation for resident and non-resident staffs necessitated by such patient increases. Having regard to the facts, that the Institution is not to be transferred to the Regional Hospital Board, and that the use of the wards will not be by chronic sick cases, further consideration of the suggested conversions is necessary.

The conversion of “ A ” Home was completed earlier in the year and is occupied by the night staff. The additional amenities are greatly appreciated by them.

The Staff Home (“ B ”) is used as staff residential quarters, kitchens, dining rooms, etc.

The Institution has again been fully utilised, the average daily occupancy being 756, the highest number being 790 (25th June, 1947) and the lowest 708 (1st January, 1947). There were 622 admissions, 228 discharges, and 329 deaths.

The following are the age groups of the deaths :—

	Percentage
Under 60 years of age	8
Between the ages of 60 and 70 years	15
Between the ages of 70 and 80 years	42
Between the ages of 80 and 90 years	31
Over 90 years of age	4
329	

It may be of interest to know that 97 of these persons have been resident in the Institution for periods over 1 year, namely :—

Between 1 and 2 years	25
Between 2 and 3 years	19
Between 3 and 4 years	13
Between 4 and 5 years	16
Between 5 and 10 years	16
Between 10 and 15 years	4
Over 15 years	4

The longest stay was 19 years 7 months.

Waiting List.

A waiting list has been maintained throughout the whole period, but generally the position has not been so bad as in the previous year. For a short period there were no male cases on the list and at another period no females.

As all the wards have been available for the major part of the year it will not be possible to dispense with the list until additional accommodation is provided, or the demand on the present accommodation is reduced.

The following are the details of the waiting list for the year :—

Statistical Summary.

	Men	Women	Total
On list, 1st January 1947.. .. .	6	29	35
Additions to list	202	365	567
Totals	208	394	602
Admitted to Institution	115	233	348
Removed from list (deaths, admitted to other places, etc.)	88	140	228
Totals	203	373	576
Remaining on list 31st December, 1947	5	21	26
Highest numbers (8th April, 1947).. .. .	45	—	—
„ „ (13th February, 1947)	—	66	—
Lowest numbers (20th May, 1947 to 30th June 1947)	0	—	—
„ „ (19th September to 28th September, 1947	—	0	—

Evacuees.

Of the 6 evacuees (1 male, 5 females) remaining at the end of the last period, the man has been transferred to his own place of residence and 2 women have died, leaving 3 women still in the Institution.

Outings.

Further outings to the seaside were organised during the summer and every patient, who was able and desired to do so, was taken. Trips to Southport, Lytham St. Annes, and Cleveleys (twice) were arranged and 222 patients participated. The patients greatly enjoyed these outings and they are the main topic amongst them for many weeks both before and after the events.

Gifts.

Many gifts were received and each has been gratefully acknowledged. Further gifts of food were received from overseas and have been most acceptable and greatly appreciated.

Staff.

With the employment of part-time staff all the wards were opened and whilst difficulty has been experienced in recruiting trained nursing staff, the year has passed without any serious difficulties.

SWINTON HOME.

By W. T. Williams, Secretary-Steward.

STAFF.

(a) *Full time*—

W. T. Williams, F.H.A., R.M.P.A.	..	..	..	Secretary-Steward
E. Williams, R.M.P.A.	Matron.

(b) *Part time*—

R. B. H. Faichney, M.R.C.S., L.R.C.P.	Visiting Medical Officer
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This Home for certified mental defectives has accommodation for 130 children under the age of 16 years. The average number of beds occupied was 107, this low figure being due to shortage of nursing staff.

The general behaviour and conduct of the children have been excellent, there being no serious misdemeanour of any kind.

All patients who are teachable receive training in the school attached to the Home. The school is adequately staffed with trained personnel and is organised into four mental age groups. Instruction is given in rhythmic activity, percussion band, physical training, handicraft and imaginative play. Every child is given an individual test by the Merrill Terman 1937 revision of the Binet-Simon method and placed in one of the four previously mentioned groups.

The recreation of the children is well catered for and they are taken individually and in groups to the local cinemas and theatres. Last summer they were taken for a day to Southport, whilst at Xmas parties are taken to the pantomimes. Short holidays with their parents are greatly encouraged and small groups of children are taken out frequently to tea and parties at the homes of the nursing staff. Parties of entertainers visit the Home.

The children receive a good varied diet in which fresh fruit and green vegetables play a large part. Chocolates and sweets are provided weekly.

There have been no epidemics of communicable disease, and the general health of the children has been good. All acute cases of illness have been promptly recognised and treated.

All buildings have been maintained in a good condition.

AMBULANCE AND DISINFECTING STATION,
MONSALL HOSPITAL.

The Ambulance and Disinfecting Station adjoins Monsall Hospital for Infectious Diseases. This is an advantage, as upon the receipt of a call to remove an infectious case an ambulance is able to call at the hospital, collect a nurse, and continue on its journey for the patient within a very short time.

The Station consists of three sections, viz. :—

- Ambulance Service ;
- Bedding and General Disinfection Service ; and
- Cleansing Clinic.

Ambulance Service.

Seven ambulances are utilised for this service and the conveyance, without any charge to user, of cases of infectious diseases to Monsall Hospital and Booth Hall Hospital is provided. Tuberculosis patients are also removed to Abergele, Baguley, and Delamere Sanatorium and Barrowmore Colony.

2,029 cases of infectious diseases, other than tuberculosis, were removed to Monsall Hospital, and 221 patients were removed to home addresses or other institutions, making a total of 2,250 cases. The number of tuberculosis patients removed to sanatoria was 734, making a total of 2,984 infectious cases removed. In addition, 339 non-infectious patients were removed making a final total of 3,323 cases removed. This work involved 2,987 journeys and the total mileage for the year was 62,347 miles.

The service operates within the area of adjacent local authorities who have entered into an agreement with Manchester for the treatment at Monsall Hospital of cases of infectious disease arising within their area, and for which a charge is made to the local authority concerned.

The service is operated by a series of rotating duty shifts which covers twenty-four hours, and analysis of journeys in relation to hours of admission and days of the week is as follows :—

(A) *Journeys in relation to hours of admission.*

Time	10-30 p.m. to 7-30 a.m.	7-30 a.m. to 12-0 noon	12-0 noon to 3-0 p.m.	3-0 p.m. to 6-0 p.m.	6-0 p.m. to 10-30 p.m.
Total	63	484	691	460	331

(B) *Journeys in relation to days of week.*

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Frequency	184	334	293	320	302	303	293

Bedding and General Disinfection Service.

Upon cases of infectious diseases being removed to hospital, a service is provided for the disinfection of clothing and bedding and 3 bedding vans are employed for the collection and return of these articles. Arrangements have been made with the Royal Air Force for the fumigation of blankets used in local R.A.F. stations and, in addition, the fumigation of second-hand clothing for export is also undertaken. 65,393 articles were removed and disinfected and 148,000 R.A.F. blankets were fumigated, necessitating a mileage of 31,070 miles.

Cleansing Clinic.

The cleansing clinic deals with the following types of personal cleansing, viz. :—

- (1) The treatment of Scabies in adults and children.
- (2) The disinfection of persons from clearance areas before removal to Corporation houses, and
- (3) The cleansing of verminous persons, both voluntary and compulsory.

The staff consists of a sister and nurse for the treatment of scabies and 3 orderlies (1 male and 2 female).

The following table shows the number of treatments in their various classifications :—

	Scabies	Voluntary cleansing	Compulsory cleansing	Disin- festations	Total
January	554	112	36	109	811
February	328	86	11	112	537
March	376	77	10	73	536
April	568	137	—	105	810
May	225	40	4	95	364
June	317	90	23	145	575
July	284	78	31	178	571
August	235	66	—	119	420
September	91	59	30	130	310
October	81	284	42	188	595
November	154	42	34	66	296
December	139	41	21	86	287
Totals	3,352	1,112	242	1,406	6,112

MATERNITY AND CHILD WELFARE.

By Dr. Margaret H. Mackillop, Assistant Medical Officer of Health
(Maternity and Child Welfare).

STAFF.

Medical—

Margaret H. Mackillop, M.B., CH.B.	Assistant Medical Officer of Health (Maternity and Child Welfare)
Helen G. M. Bennett, M.B., CH.B., D.P.H.	
Muriel J. Brayshay, M.B., CH.B. (from 1st September, 1947)	} Centre Medical Officers (13)
Alice I. Burke, M.B., CH.B. (from 1st September, 1947)	
Violet Conway, M.B., CH.B., D.R.C.O.G., D.P.H. (resigned 25th October, 1947)	
Julia M. D. Corrigan, M.B., B.CH., B.A.O., D.P.H. (from 4th November, 1947)	
Annie M. Dawson, B.SC., M.B., CH.B., D.C.H., D.O.	
Florence M. Edmondson, M.B., CH.B.	
Greta Farmer, M.B., CH.B.	
Rosaline Howat, M.B., CH.B.	
Margaret T. McCaffrey, M.B., B.CH., B.A.O., L.M., D.C.H., D.P.H. (from 3rd November, 1947)	
Margaret E. Pilsworth, B.A., M.B., B.CH., B.A.O.	
Lydia Scarff, L.R.C.S., L.R.C.P. (from 3rd February, 1947)	
Marion Stocks, B.SC., M.B., B.S., D.P.H. (retired 15th November, 1947)	
Beryl Wyke, M.B., CH.B., D.P.H.	

Nursing—

Gladys A. Treloar, S.R.N., S.C.M.	Non-medical Supervisor of Midwives.
Annie M. Phillips, S.R.N., S.C.M. (acting from 26th May, 1946)	Superintendent of Health Visitors
Assistant supervisors of midwives	2
Deputy superintendent of health visitors	1
Assistant superintendent of health visitors	2
Municipal midwives	61
Maternity nurses	6
Ophthalmic nurses	3
Special nurse for premature babies	1
Health visitors	91
Physiotherapists	12

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Lay—

Charles A. Hay, M.B.E.	Senior Administrative Assistant.
Clerks	50
Others	87
Day nursery staff	392

The Midwifery Service.

During 1947 notice of intention to practice was given by 246 midwives, of whom 124 were employed in hospitals, 31 in nursing homes having no medical attendant, 10 were in independent domiciliary practice, 67 were municipal midwives, and 14 were employed by District Nursing Institutions.

Notified Births.

(1) Births at home	7,282
(a) Taken by midwives, including cases in which the midwife acted as maternity nurse (based on yearly return of cases made by midwives to the Local Supervising Authority)	6,594
(b) Taken by doctors (no midwife present)	2
(c) Taken by St. Mary's Hospital district staff in Manchester area	686
(2) Births in Institutions	9,301
(a) Hospitals	7,170
(b) Maternity homes registered under Sections 187/192 of the Public Health Act, 1936.. .. .	2,131
Total	<u>16,583</u>

Analysis of cases taken by Midwives who notified intention to practice.

Midwives notifying intention to practise	Midwives	Midwife only at the case		Midwife with doctor called in		Midwife as maternity nurse	Total cases
		Primi-parae	Multi-parae	Primi-parae	Multi-parae		
1. Births at home—							
(a) Municipal midwives ..	67	913	3,371	293	656	791	6,027
(b) Independent midwives living in Manchester area	6	32	51	2	9	19	113
(c) Independent midwives living outside Manchester area	4	3	49	2	4	23	81
(d) Midwives employed by District Nursing Institution	14	29	166	24	48	106	373
Total	91	977	3,637	324	717	939	6,594
2. Births in institutions—							
Midwives employed in registered nursing homes having no resident medical officer	31	261	361	174	128	625	1,549
Total	122	1,238	3,998	498	845	1,564	8,143

Supervision of Midwives.

Midwives were temporarily suspended from work on 173 occasions on account of contact with infection or of being themselves liable to be a source of infection.

Midwives are encouraged to report cases with raised temperature before they become notifiable under the Puerperal Pyrexia Regulations, 1939. A staff of trained nurses is available to take over such cases.

No breach of the rules was reported.

Handywomen.

In addition to the prohibitions contained in the Midwives Acts of 1902 and 1926, Section 6 of the Midwives Act, 1936, enables the Minister of Health to make an Order for the area of a local supervising authority prohibiting unqualified persons from receiving any remuneration for attending as a nurse on a woman in childbirth or during the following 10 days. Such an Order has been made for Manchester and is entitled the "City of Manchester (Prohibition of Unqualified Persons) Order, 1939."

2 cases were reported where a relative had attended the mother. Both stated that they received no payment for their services.

Payments to independent midwives by local authority.

The City Council has approved a payment of 10/- to a midwife in independent practice who loses her fee in a case booked by her which is transferred to hospital prior to or during delivery on the recommendation of a medical officer at a welfare ante-natal clinic. There were no claims during 1947.

Municipal Midwives.

Applications for municipal midwives numbered 6,838. 180 of these applications were withdrawn either for domestic reasons or removal from the district. 697 were transferred to hospital on account of unsatisfactory conditions before or during labour and 139 pregnancies ended before the 28th week.

There was no change during the year for fees charged for the services of a midwife, viz. :—

First confinement, midwife only	40/-
Second and subsequent confinements, midwife only ..	35/-
First confinement, doctor engaged	35/-
Second and subsequent confinements, doctor engaged ..	30/-

41 of the cases attended were assessed to pay part fee and no charge was made in 62 instances.

Cases taken by municipal midwives during 1947 show an increase of 1,433 on the previous year.

Details of their work and visits are as follows :—

Deliveries between 9-0 a.m. and 9-0 p.m.	2,786
Deliveries between 9-0 p.m. and 9-0 a.m.	3,241
Total deliveries as midwife or maternity nurse ..	6,027
Cases of miscarriage nursed	81
Morning visits	72,035
Evening visits	21,837
Visits to patients discharged from municipal hospitals before the 14th day of the puerperium ..	3,064
Ante-natal visits to patients in their own homes ..	16,697
Ante-natal visits by patients to midwives' homes ..	18,379
Attendances by midwives at ante-natal clinics ..	14,069
Emergency calls	63

Midwives' clinics are held at 11 welfare centres and these facilities are being extended to other districts as circumstances permit.

Gas and Air Analgesia.

8 more midwives were trained in the administration of gas and air analgesia, the total qualified being 58, of whom 51 have been supplied with Minnitt's apparatus. 989 patients availed themselves of the facilities.

Training of Midwives.

13 municipal midwives are approved as "teacher midwives" by the Central Midwives Board, 3 of whom did not take pupils during the year. The number of pupils trained was 26.

A series of six post-graduate lectures commencing in the autumn of 1947 was given by specialists and were well attended and much appreciated by the midwives.

Medical Aid.

In accordance with the Rules of the Central Midwives Board with regard to calling in medical aid, records were received as follows :—

Source of request for medical aid	Requests sent to doctors		Patients referred to medical officers at ante-natal clinics
	Assistance in Labour and Puerperium	Assistance during pregnancy	
Municipal and independent midwives ..	2,241	272	3,078
Midwives of the District Nursing Institution	78	11	35
Midwives in maternity homes having no resident medical officer	196	5	—
Total	2,515	288	3,113

Puerperal Pyrexia.

309 cases of puerperal pyrexia were notified. Every case is investigated at the patient's home address. The rate per 1,000 births was 18·09.

Causes of pyrexia were :—

Puerperal sepsis	63
Septic abortion	34
Simple abortion	16
Incomplete abortion	34
Threatened abortion	1
Mastitis	28
Urinary infection	27
Mild uterine infection	18
Tuberculosis	7
Pneumonia	5
Bronchitis	5
Influenza	5
Venereal infection	2
Pleurisy	1
Tonsillitis	1
Ovarian cyst	1
Parotid abscess	1
Infected perineum	1
Chorionic epithelioma	1
Unclassified	58
	<hr/>
	309

Classification of notified cases of Puerperal Pyrexia.

Notified causes	Abortion	Deaths from abortion	Full term and premature labour	Deaths at term
Puerperal Sepsis—97	2—3 months .. 20 3—4 „ .. 10 4—6 „ .. 4 <hr/> 34 <hr/>	1	Normal labour .. 38 Abnormal labour .. 25 <hr/> 63 Of these— Full-term .. 56 Premature .. 7 <hr/> 63 <hr/>	1
Puerperal Pyrexia— 212	2—3 months .. 32 3—4 „ .. 14 4—6 „ .. 6 <hr/> 52 <hr/>	—	Normal labour .. 117 Abnormal labour 43 <hr/> 160 <hr/> Of these— Full-term .. 132 Premature .. 28 <hr/> 160 <hr/>	1

Analysis of cases of Puerperal Sepsis and Puerperal Pyrexia.

NUMBER OF CASES	MIDWIFE						Doctor, Midwife acting as Maternity Nurse			Doctor, No skilled nursing			INSTITUTION			HOSPITAL, External District		
	Midwife alone			Doctor present, called in according to C.M.B. Rules			Number of Cases	Attack Rate per 1,000 Cases taken	Number of Deaths	Number of Cases	Attack Rate per 1,000 Cases taken	Number of Deaths	Number of Cases	Attack Rate per 1,000 cases taken	Number of Cases	Attack Rate per 1,000 cases taken	Number of Deaths	
	Number of Cases	Attack Rate per 1,000 Cases taken	Number of Deaths	Number of Cases	Attack Rate per 1,000 Cases taken	Number of Deaths												
PUERPERAL SEPSIS (97 Cases)																		
Labour and premature labour .. 63	16	3.28	—	10	18.9	—	6	3.43	—	—	—	—	28 (includ- ing 15 resident outside Man- chester)	3.01	1	3	—	—
Abortions .. 34	—	—	—	—	—	—	—	—	—	34 (27 direct to Monsall Hospital, 7 via other Hosp'ls)	—	1	—	—	—	—	—	
PUERPERAL PYREXIA (212 Cases)																		
Labour and premature labour .. 160	19	3.63	1 (due to tuber- culosis)	4	7.5	—	1	0.10	—	—	—	—	132 (includ- ing 27 resident outside Man- chester)	14.09	—	4	—	—
Abortions .. 52	—	—	—	—	—	—	—	—	—	52 (46 direct to Monsall Hospital, 6 via other Hosp'ls)	—	—	—	—	—	—	—	
Total cases .. 309	35	—	1	14	—	—	7	—	—	86	—	1	160	—	1	7	—	—

Maternal Deaths.

25 deaths from childbirth occurred, the maternal mortality rate being 1·45. The figures for 1946 were 23 and 1·60 respectively.

Of 9 deaths from puerperal sepsis 3 were full time pregnancies, the patients being confined in institutions, and 6 deaths occurred in early pregnancy.

Causes of death in childbirth were as follows :—

Puerperal sepsis—

Septicaemia due to septic infection of retained products of conception	1	
Pyæmia following septic metritis due to a septic abortion	1	
Acute heart failure due to shock and hæmorrhage following abortion	1	
Septicaemia following infection of the uterus due to septic abortion	1	
Uraemia due to acute toxic nephritis, secondary to septic abortion	1	
Septic abortion	1	
Septicaemia	1	
Pulmonary embolus, pyrexia, bilateral phlegmasia alba dolens	1	
Lobar pneumonia, bacterial endocarditis, puerperal endometritis	1	
	—	9

Other causes—

Haemorrhage due to rupture of tubal pregnancy ..	1	
Acute heart failure	3	
Pulmonary embolism	2	
Mitral stenosis	1	
Necrosis of kidney	1	
Atrophy of liver	1	
Cerebral thrombosis	1	
Obstetric shock	1	
Paralytic ileus	1	
Air embolism	1	
Uraemia	1	
Haemorrhage and shock	1	
Acute myocardial failure	1	
	—	16
Total		25

In addition there were 9 deaths where childbirth was not the primary cause of death.

Pemphigus Neonatorum.

53 cases of pemphigoid eruptions were reported. 16 of these were notified as pemphigus neonatorum and 37 were not notified as such. One death occurred.

51 cases occurred in children under two weeks and 2 in children between 2 and 3 weeks old.

The total number of cases is 8 less than in 1946.

46 of these cases nursed by special nurses were of a mild type and the skin conditions were reported to be satisfactory within one month. One midwife had 4 babies with slight pemphigoid rashes, but recovery was rapid in each instance. One baby died, the certified cause of death being (a) pulmonary atelectasis, (b) congenital weakness, (c) cutaneous sepsis.

Stillbirths.

Notified stillbirths	Delivered by			Percentage of notified births
	Midwives, including cases where doctor called in under C.M.B. rules	Doctors, including cases where midwife acted as maternity nurse	Hospital and nursing home staff	
* 513	88	26	399	3.05

* Including 86 cases where the mothers' home address was outside the City.

Stillbirths in the practice of midwives.

The percentage of still births for all midwives cases was 1.57. Particulars of the cases are as follows :—

	Primipara	Multipara	Total
Foetus fresh	9	26	35
Foetus macerated	12	41	53

Neonatal deaths in midwives' practices.

There were 54 neonatal deaths, 7 of which occurred before a medical practitioner could attend and were referred to the Coroner. The findings of the Coroner in these 7 cases were :—

Pulmonary atelectasis	..	..	..	..	..	1
Prematurity	..	..	..	..	..	3
Inattention at birth	..	..	..	..	..	2
Congenital heart disease	..	..	..	..	..	1

The care of premature and weakly babies.

The Ministry of Health Circular 20/44 dated March 22nd, 1944, on the care of premature infants, makes recommendations on arrangements for the care of these infants. In addition to the recommendations which were implemented in 1944, arrangements were made for cots fitted with draught-proof linings, blankets and 3 hot water bottles to be available at 3 municipal hospitals as and when required by doctors and midwives. These cots were in use on 36 occasions during the year.

A special nurse for the care of premature babies was appointed in August, 1945.

The following table gives a summary of the work done :—

Total number attended	..	..	..	..	194
Number where attendance ceased—baby attained 7lbs. weight	..	..	..	..	164
Transferred to hospital	..	..	..	..	16
Died at home:—					
(a) whilst nurse still attending	..	..	..	..	3 (including twins weighing only 2lbs. each)
(b) after nurse ceased to attend	..	..	..	..	—
42 infants were born under 4lbs. in weight and					35 survived.
100 „ „ „ 4 to 5 lbs. „ „					100 „
53 „ „ „ 5 to 6 lbs. „ „					51 „
Average time nurse attended each case	..	..	..	..	7½ weeks.
Infants breast fed	..	..	..	..	59
Infants breast and complementary fed	..	..	..	..	29
Infants artificially fed	..	..	..	..	87

Nursing of 11 infants under 7 lbs. weight ceased due to removal of the infants from the district and other causes.

Artificial Feeding.

327 notifications of recourse to artificial feeding were received, 47 from midwives and 280 from institutions. In only one case was it stated that artificial feeding was supplementary and not a complete change over. Of the remainder the causes given were :—

Tuberculosis in mother	..	..	..	..	26
Malformed nipples	..	..	..	..	59
Social reasons	..	..	..	..	17
Adoption of baby	..	..	..	..	20
Mastitis	..	..	..	..	31
Mother returning to work	..	..	..	..	2
Poor health of mother	..	..	..	..	120
Baby not progressing	..	..	..	..	27
On advice of doctor	..	..	..	..	23
Twin pregnancy	..	..	..	..	1
					—
					326
					—

Maternity nurses, ophthalmic nurses, and nurse for the care of premature babies.

The visits paid by these nurses are summarised as follows :—

	Visits
Notified cases of puerperal pyrexia	420
Cases of raised temperature	1,630
Mammary abscess and mastitis	805
Phlegmasia alba dolens and phlebitis	82
Mothers whose condition was unsatisfactory during and after the lying-in period	292
Mothers with septic skin condition	108
Cases of abortion	54
Cases of infection in the house	18
Promotion and re-establishment of breast feeding ..	14
Mothers of infants suffering from pemphigus neonatorum	31
Premature and immature babies	2,114
Septic and unsatisfactory conditions of the umbilicus	197
Pemphigus neonatorum and other skin infections ..	929
Spina bifida	133
Mastitis	62
Ophthalmia neonatorum	81
Other unsatisfactory conditions	94

Summary of investigations other than nursing visits made by the Supervisor of Midwives and Special Maternity Nurses:—

Investigation visits to notified cases of puerperal pyrexia ..	280
„ „ re maternal deaths	31
„ „ re cases of pemphigus neonatorum ..	7
Total	<u>318</u>
Visits for domiciliary nursing (including ophthalmic nursing)	13,529
Visits by Supervisors of Midwives	436
	<u>13,965</u>

Ophthalmia.

Three state registered nurses with special ophthalmic training and experience are employed. They visit and treat, under medical supervision, all cases of eye disease from birth to school age when those who still have eye defects are referred to the School Health Service. Cases are reported by midwives under the rules of the Central Midwives Board, medical practitioners and hospitals, medical officers at welfare centres and health visitors. 693 cases were visited. Of these 222 were of eye disease in older children (*i.e.*, 3 weeks to 5 years), and 481 cases of ophthalmia neonatorum. The visits paid numbered 6,299.

Ophthalmia Neonatorum.

383 cases were reported by midwives for unsatisfactory eye conditions. 66 of these were infants who had been discharged from hospital before the 14th day. In addition 98 were notified by medical practitioners (either privately or at the Royal Eye Hospital) as cases of ophthalmia neonatorum. Swabs were taken from the conjunctivae when possible and examined bacteriologically for the presence of gonococcus. Of 34 swabs examined 2 gave a positive result.

Corneal Defects.

No corneal defect occurred in any case of ophthalmia neonatorum during the year. There were no cases of blepharitis reported during the year and there was only one case of corneal ulcer, which was traumatic.

The following table gives the record of corneal conditions and blepharitis for the last 6 years :—

Corneal conditions and Blepharitis.

Year	Blepharitis	Corneal Opacity found as ulcer or nebula
1942.. ..	13	10
1943.. ..	13	7
1944.. ..	5	5
1945.. ..	11	5
1946.. ..	2	1
1947.. ..	0	1

Ophthalmia Neonatorum and Conjunctivitis—History of Mother.

	Age of Mother						Parity									Labour			No. of mothers having Ophthalmia Neonatorum	History of yellow discharge	Legitimacy					
																Normal	Abnormal	Attendant not present at birth			Legitimate	Illegitimate				
Under 20	20-25	25-30	30-35	35-40	Not Ascertained	Total	1	2	3	4	5	6	7	8	9	Not Ascertained	95	3	—	1	—	91	7	3	1	
Notified cases	2	28	28	27	12	1	98	41	30	17	7	3	—	—	—	—	—	95	3	—	1	—	91	7	5	—
Not notified (midwives' cases)—																										
(a) Own cases	7	65	96	89	60	—	317	67	108	78	35	14	7	3	2	—	—	315	2	—	5	—	314	3	5	—
(b) Hospital discharges under 14 days	4	24	21	7	10	—	66	36	19	6	3	—	—	1	—	1	—	64	2	—	—	1	65	1	—	—

Ophthalmia Neonatorum and Conjunctivitis.

	Interval in days between birth and onset										Attended by			Where treated				Total		
											Midwife	Doctor	Midwife and Doctor	Institution	Home	Out-patients at Royal Eye Hospital	In-patients at Royal Eye Hospital		Other Institutions	Not visited
	1	2	3	4	5	6	7	8	9	10	Total									
Notified cases	2	5	3	2	8	14	12	11	5	36	98	54	—	5	39	50	9	36	1	2
Not notified (midwives' cases)	9	16	11	23	22	26	46	46	31	87	317	308	—	9	—	311	6	—	—	—
Hospital discharges under 14 days	3	1	2	—	5	7	9	15	6	18	66	—	—	—	66	64	2	—	—	—

361 were treated by private practitioners. 53 received treatment at the Royal Eye Hospital and 1 in another institution.

**Progress of cases of Ophthalmia Neonatorum and Conjunctivitis in
newly-born infants.**

	Complete recovery	Death	Removed before recovery	Still under treatment
Notified Ophthalmia Neonatorum (98 cases)	96	1	1	—
Conjunctivitis (317 cases)	315	1	1	—

Analysis of Eye Diseases in Children.

	Brought forward from 1946	New cases in 1947	Carried over to 1948
Conjunctivitis (simple)	13	78	3
Conjunctivitis (purulent).. .. .	—	2	—
Lacrimal obstruction	3	22	—
Dacryocystitis	—	2	—
Blepharitis.. .. .	2	—	—
Corneal Ulcer	1	1	2
Corneal Nebula	5	—	1
Coloboma	3	—	2
Cataract (congenital)	7	1	6
Cataract (polar)	1	—	1
Glioma	3	—	3
Defective vision	3	—	3
Microphthalmus	1	1	1
Pterygium	—	—	—
Nystagmus	3	1	3
Anophthalmus	2	—	—
Hordeolum	—	—	—
Phlyctenula	—	1	2
Albino	2	—	1
Ptosis	1	—	—
Ruptured Globe	1	—	1
Buphthalmos	2	—	1
Photophobia	—	—	—
Trauma	1	—	—
	54	109	30

Sunshine Home for Blind Babies.

Two children who were maintained by the Health Committee in the Sunshine Home reached school age and were transferred to the Education Committee for supervision and care.

Maternity Beds.

The arrangements made by the Health Committee comprise the following :—

- (1) Maternity units at the two municipal general hospitals, Crumpsall and Withington, providing 121 and 100 beds respectively, a total of 221 beds.
- (2) Maintenance of beds in voluntary institutions, viz. :—

St. Mary's Hospitals (for first and abnormal cases)	..	2
Denison House (closed on 1st December, 1947)	..	2
North Manchester Maternity Home	.. ..	2
Crossley Hospital	.. ..	2
- (3) Municipal Maternity Homes at Prestbury Hall and Collar House, Prestbury, Cheshire.

The beds provided comprise of 20 at Prestbury Hall and 36 at Collar House.

The following admissions were arranged :—

(1) Maternity wards of municipal hospitals	.. ..	4,962
(2) Reserved beds in voluntary institutions	.. ..	95
(3) Prestbury Hall	.. ..	574
(4) Collar House	.. ..	932
		— 1,506*

* Including 14 from outside the City Boundary.

The average stay at Prestbury Hall was 12·3 days and at Collar House 13·6 days.

Welfare Centres.

At the end of 1947 there were 23 municipal welfare centres and 2 voluntary centres. One voluntary centre is held at the Holy Name School, the medical officer being supplied by the Corporation. Other staff at this centre are provided by the Sisters of Charity of St. Vincent de Paul. The other voluntary centre was commenced in January, 1947, and is attached to the out-patients department of the Duchess of York Hospital for Babies, Burnage. Infant sessions only are held at this centre which is staffed by the Hospital Committee, the maintenance costs being paid by the City Council. There were 2,232 attendances at the centre during 1947.

At the various centres there are 128 weekly medical consultations, comprising 74 infant, 6 sunlight, and 48 ante-natal sessions. There are 5 toddlers' sessions, at which an attempt is made to secure only the attendance of children between 2 and 5 years old.

At the end of the year there were on the centre registers:—

9,910 children under 1 year	} Total 16,569.
3,855 children between 1 and 2 years	
2,814 children between 2 and 5 years	

187,917 attendances were made at these sessions:—

149,881 by children under 1 year.
22,469 by children between 1 and 2 years.
9,637 by children between 2 and 3 years.
4,242 by children between 3 and 4 years.
1,688 by children between 4 and 5 years.

Toddlers' Sessions.

Weekly examination sessions for children between 2 and 5 years old are held at 5 centres and the parents are encouraged by health visitors to take their children for examination in cases where they are unable to obtain continued medical supervision.

Massage and Remedial Exercises.

Massage treatment is provided at 19 centres, where 42 sessions are held each week. At 8 centres a weekly class of remedial exercises is held for children from 2 to 5 years. The ailments treated are postural defects, rickety deformities, general or local poor muscular tone, and some of the milder birth injuries.

There were 13,755 attendances for massage and 3,204 for remedial exercises.

Artificial Sunlight.

Treatment by ultra-violet light is given at Chorlton-upon-Medlock, Cheetham Hill Road, Newton Heath, Ardwick, and Collyhurst Centres.

The number of individuals treated was 1,005—comprising 971 children of whom 122 were under 1 year old, and 34 adults. The total treatments given numbered 18,928. The adults included expectant mothers suffering from the various discomforts of pregnancy and post-natal debility, bronchitis, asthma, and rheumatism. Children were treated for adenitis, boils, asthma, rickets, anaemia, and malnutrition. 310 children ceased to attend before treatment was completed. All cases discharged were asked to attend for re-examination at a period of from 2—3 months after cessation of treatment, and 75 per cent. kept their appointments. 39 were recommended to have a further course of treatment.

Dental Clinics.

Sessions for dental treatment of nursing and expectant mothers and for children are held weekly at Rosamond Street West and Cheetham Centres. Dental treatment is given followed by three or six monthly invitations for further inspection and treatment.

Cookery Classes.

Practical instruction in cookery was continued at 6 welfare centres, where mothers were taught the value of food and the preparation of meals.

Make Do and Mend Classes.

Four "make do and mend" classes were provided during 1947 for instructive advice to the mothers in Collyhurst, Withington, Northenden, and Hulme districts.

Voluntary Workers.

Voluntary workers gave very useful assistance at the welfare centres during the year, making 3,585 attendances. The number of voluntary workers and attendances made show a reduction from previous years owing to the Corporation taking over from the Schools for Mothers the supply and sale of proprietary brands of dried milks and sundries at the centres as from 1st April, 1947, and the provision of Corporation staffs for this and other purposes.

Opportunity is taken to record appreciation of the valuable services rendered in welfare centres over a long period of years by the Manchester Schools for Mothers.

The School for Mothers Holiday Home at "Oakleigh," Marple, which was opened in 1936 for mothers and babies, was again full during the summer months. Advance payments by mothers towards the cost of their stay in the Holiday Home are received at the centres by corporation staffs on behalf of the Schools for Mothers.

Ante-natal Clinics.

Ante-natal clinics are provided at 20 centres where a total of 48 sessions are held weekly.

Four weekly sessions are held at Ardwick and Openshaw; thrice weekly at Blackley, Chorlton-upon-Medlock, Collyhurst, Gorton, Harpurhey, Newton Heath, Northenden, Rusholme, and Withington; and bi-weekly at Cheetham, Clayton, Hulme, and Levenshulme. Single sessions are held at Abbey Hey, Ancoats, Chorlton-cum-Hardy, New Moston, and Crumpsall. At Rosamund Street, Ardwick, and Hulme Centres these clinics are combined with V.D. treatment for mothers and children.

12,585 new mothers presented themselves and 51,307 attendances were made.

In addition to the ante-natal sessions provided at these welfare centres, there are ante-natal clinics at St. Mary's Hospitals and Crumpsall and Withington municipal hospitals.

Post-natal Clinics.

Every attempt was made to secure the attendance of mothers for post-natal examination at one of the 20 ante-natal clinics and 531 mothers presented themselves for examination 4—6 weeks after confinement. Post-natal conditions were found to be satisfactory in 423 cases and in 108 cases where conditions were considered to be unsatisfactory, advice was given to the mothers concerned.

Ante- and Post-natal Exercises.

Exercises for mothers during the ante- and post-natal periods are held at four welfare centres. At Northenden, Withington, and Rusholme the exercises are given by a physiotherapist in the employ of the department. At Levenshulme, by arrangement with Ancoats Hospital, a member of the staff of the Physiotherapy Department has continued to conduct these classes.

The attendances were :—

Northenden	..	..	..	..	..	..	11
Withington	..	..	..	..	..	..	545
Rusholme	..	..	..	..	..	..	423
Levenshulme	..	..	..	..	..	..	374
							— 1,353

The purpose of this treatment is to improve the condition of mothers before and after confinement.

*Ailing Children.**Hospital Treatment.*

20 beds for children under 1 year and 10 for children between 1 and 3 years are retained at the Duchess of York Hospital for Babies and 180 beds for children under 5 years are provided at Booth Hall Hospital.

Recommendations for admission to these and to Booth Hall Hospital are made by the medical officers of welfare centres administered by the department.

The number of children admitted to each hospital is shown below :—

	No. admitted
Duchess of York—Cots	226
Large beds	111
Booth Hall	31
	—
Total	368

The diagnosis made in the case of children under one year admitted to the Duchess of York Hospital and Booth Hall Hospital was as follows :—

	Duchess of York Hospital	Booth Hall Hospital
Prematurity	7	1
Congenital diseases and defects	7	2
Nutritional conditions	53	5
Gastro-intestinal conditions	42	9
Respiratory conditions	47	1
Surgical conditions	42	3
Miscellaneous diseases of bacterial origin	23	2
Miscellaneous diseases of nervous origin	1	—
Mismanagement	2	—
Scalds	1	—
X-ray investigation	1	—
	226	23

Diagnosis of children over 1 year admitted to Duchess of York and Booth Hall Hospitals :—

	Duchess of York Hospital	Booth Hall Hospital
Nutritional disorders	10	—
Gastro-intestinal conditions	5	—
Respiratory conditions	30	1
Surgical conditions	40	2
Miscellaneous diseases of bacterial origin	24	2
Miscellaneous diseases of nervous origin	2	—
Infectious diseases	—	—
Tonsils and adenoids	—	3
	111	8

The ages of children on admission were :—

	Duchess of York Hospital	Booth Hall Hospital
Under one month	33	7
1—3 months	61	7
3—6 months	56	5
6—9 months	34	3
9—12 months	30	1
1—2 years	61	3
2—3 years	40	2
3—4 years	16	2
4—5 years	6	1
	337	31

Dental Inspection, 1947.
Mothers.

	Cheetham	Chorlton-upon-Medlock	Total
(1) Mothers who were inspected by the dentist ..	207	209	416
(2) Found to require treatment	207	209	416
(3) Treated	198	208	406
(4) Attendances made by mothers for treatment ..	444	427	871
(5) Half-days devoted to inspection and treatment	50	50	100
(6) Extractions	881	877	1,758
(7) Other operations	10	8	18

Dental Inspection, 1947.
Children.

	Cheetham	Chorlton-upon-Medlock	Total
(1) Children who were inspected by the dentist:—			
Routine age groups..	<div><div><div>1 year 4</div><div>2 years 27</div><div>3 „ 78</div><div>4 „ 129</div><div>5 „ 210</div></div><div>Total448</div></div>	<div><div><div>1 } 45</div><div>114</div><div>204</div><div>367</div></div><div>Total731</div></div>	<div><div><div>5 } 72</div><div>192</div><div>333</div><div>577</div></div><div>Total1,179</div></div>
(2) Found to require treatment	448	731	1,179
(3) Treated	448	731	1,179
(4) Attendances made by children for treatment ..	448	731	1,179
(5) Half-days devoted to inspection and treatment	49	49	98
(6) Fillings—temporary teeth	1,721	2,563	4,284
(7) Extractions—temporary teeth	47	166	213

Ante-Natal Cases at centres and results of delivery, 1947.

Centre	On Register on 1st Jan., 1947	New cases	Transferred from other Centres	Total	Still on Register Jan. 1st 1948	"Term" births	Still-births included in "term" births	Premature births	Still-births included in premature births	Mothers left district before confinement	Transferred to other Centres	Mothers not pregnant	Totals
Abbey Hey	15	167	9	191	61	112	4	8	3	9	1	—	191
Ancoats	90	187	1	278	58	197	3	11	3	5	7	—	278
Ardwick	193	552	7	752	129	499	2	55	7	37	7	25	752
Blackley	260	560	11	831	211	550	11	35	14	21	9	5	831
Chorlton-upon-Medlock	151	342	5	498	118	337	7	13	6	11	7	12	498
Chorlton-cum-Hardy	—	54	30	84	62	17	—	2	2	1	1	1	84
Cheetham	248	570	10	828	213	521	3	37	2	40	7	10	828
Clayton	126	325	1	452	82	314	4	30	9	13	8	5	452
Collyhurst	268	753	6	1,027	233	693	11	63	19	17	1	20	1,027
West Gorton	256	589	4	849	185	576	5	38	7	24	16	9	848
Harpurhey	249	607	6	862	198	594	3	48	20	6	1	14	861
Hulme	107	298	5	410	83	290	3	17	2	14	1	5	410
Levenshulme	218	439	4	661	138	422	6	26	1	62	5	8	661
New Moston	—	47	9	56	46	8	—	1	—	—	—	1	56
Newton Heath	229	597	6	832	173	541	6	38	11	68	4	8	832
Northenden	217	603	7	827	189	561	9	40	6	12	15	10	827
Openshaw	368	822	5	1,195	290	785	9	80	11	13	9	18	1,195
Rusholme	307	798	1	1,106	252	671	8	56	6	99	11	17	1,106
Withington	265	577	4	846	192	591	8	4	—	29	21	9	846
Totals	3,567	8,887	131	12,585	2,913	8,279	102	602	129	481	131	177	12,583

In addition, one mother attending West Gorton Centre and one mother attending Harpurhey Centre died undelivered.

Remedial Day Nurseries.

The Manchester Schools for Mothers maintained two such nurseries until 31st March, 1947, and 31st July, 1947, respectively when they were discontinued and the children concerned were accommodated in the Health Committee's day nurseries.

The nurseries were at Openshaw and in the grounds of the University Settlement at Ancoats, and the children who attended were between 18 months and 5 years of age suffering from rickets, malnutrition, and debilitated conditions.

Minor Ailments.

318 children under 5 years were referred from the welfare centres to school clinics for treatment for the eyes, ears, nose, skin, etc. 670 children were still undergoing treatment for ailments which had not been cured in 1946, thus the total number of children was 988.

The classification of ailments and the attendance of these children is shown, also the number who finished treatment.

Where attendance ceased before treatment was completed, and where non-attendance was reported, the health visitors endeavoured to secure attendance or re-attendance as necessary.

Treatment of Minor Ailments.

Ailment	New cases referred	Still under treatment from 1946	Total	Reported not attending	Ceased attending but not finished treatment	Still under treatment	Finished treatment
Squint	52	272	324	3	7	285	29
Other eye affections	30	19	49	2	—	21	26
Otorrhoea	107	109	216	3	5	130	78
Other ear affections	18	11	29	—	—	18	11
Affections of nose	4	9	13	—	—	9	4
Impetigo	65	213	278	—	1	221	56
Other skin affections	27	29	56	—	1	28	27
Miscellaneous	15	8	23	—	—	14	9

Dried Milk and Vitaminised Foods.

The Health Committee continued to afford facilities in their welfare centres for the distribution of National Dried Milk, cod liver oil, orange juice, etc. Proprietary brands of dried milk were sold also to mothers attending the centres.

A quantity of these brands and National Dried Milk was supplied free by the department on the recommendation of the centre medical officers at a total cost of £591.

Mothercraft Exhibition.

The Maternity and Child Welfare Mothercraft Exhibition comprises a set of model garments for the child 0—5 years, diets modelled in wax indicating the necessary amount of food and calorific and vitamin contents for children. There are also exhibits of home nursing for the sick child, toys, “safety first” in the home and garden, depicting the occurrence and prevention of accidents, and craft work done by mothers at craft classes held at centres. Rug weaving and ancillary work on improvised looms is a special feature of these classes and attracts particular interest. The exhibition was supplemented on a number of occasions at the welfare centres by suitable films loaned and projected by the Central Office of Information. The exhibition is frequently loaned to other local authorities. 1,211 patterns of model garments were sold at the welfare centres, this being an increase of 50 per cent. on the previous year.

Children attending Welfare Centres, 1947.

Centre	On Register, January 1st, 1947			New attenders			Died	On Register, January 1st, 1948		
	0—1 years	1—2 years	2—5 years	0—1 years	1—2 years	2—5 years		0—1 years	1—2 years	2—5 years
Abbey Hey	370	106	163	433	16	56	3	338	254	133
Ancoats	130	68	80	230	20	37	8	168	57	55
Ardwick	484	168	206	608	62	119	22	524	206	160
Blackley	597	142	305	502	29	65	5	399	186	226
Chorlton-upon-Medlock	225	108	86	391	45	59	7	311	135	94
Cheetham	367	122	95	503	27	43	3	404	192	97
Clayton	284	90	108	352	5	19	5	258	134	70
Collyhurst	588	112	101	713	31	62	14	716	132	31
Chorlton-cum-Hardy	528	148	145	482	31	49	4	555	156	121
Didsbury	294	117	113	325	12	29	4	255	174	146
West Gorton	404	168	236	594	38	45	6	536	157	186
Harpurhey	493	117	125	609	30	47	11	507	250	134
Higher Blackley	214	53	60	230	26	41	—	246	132	84
Holy Name	52	30	44	62	7	3	—	51	23	27
Hulme	268	96	86	357	25	28	4	391	89	93
Levenshulme	675	181	258	676	25	43	1	708	167	214
Newton Heath	491	114	123	562	21	47	5	439	249	143
New Moston	213	93	57	342	32	50	1	315	149	69
Northenden	337	124	184	414	68	91	1	370	154	175
Openshaw	391	208	137	640	31	76	21	588	78	110
Rusholme	652	143	121	744	56	74	5	574	266	178
Sharston	379	178	118	363	23	43	6	297	209	139
Wilbraham	254	159	189	326	35	39	—	396	118	47
Withington	521	190	140	584	47	64	6	564	188	82
Totals	9,211	3,035	3,280	11,042	742	1,229	142	9,910	3,855	2,814
Total, 1946	8,715	4,180	3,732	9,002	643	1,136	142	9,211	3,035	3,280
„ 1945	7,412	4,195	3,878	7,744	855	1,336	128	8,715	4,180	3,732

Child Protection.

Foster Children.

There were 122 foster children at the beginning of 1946. During the year 228 new cases were placed on the register and 247 were removed, leaving a total of 103 at the end of the year.

Of the 228 new cases, 81 were illegitimate.

The following particulars show how homes were found for the 228 children concerned :—

Homes arranged by Child Protection Visitor ..	for	32 children
„ „ friends of the parents .. „	78 „	
„ „ relatives of the parents .. „	4 „	
„ „ doctor „	1 child	
„ „ midwife „	1 „	
„ „ voluntary organisation .. „	2 children	
„ „ through public advertisement „	2 „	
Returned to foster mothers	14 „	
Placed with a view to adoption	2 „	
Accommodated in private nurseries	92 „	
Total		228

The number of visits paid by the Child Protection Visitors to foster children was 1,472. Five children were removed from unsatisfactory homes at the request of the Child Protection Visitors.

247 children ceased to come under child protection provisions for the following reasons :—

Returned to parent or relative	181
Attained the age of 9 years	8
Sent to special homes	13
Removed to other districts	3
Admitted to hospitals	6
Adopted	35
Deaths	1
Total	247

Foster children who attained the age of 9 years during 1947.

Eight foster children attained the age of 9 years and all remained with the foster mothers. In two instances the foster mother was desirous of adopting the child, but the parents would not give consent.

Foster Mothers.

There were 83 registered foster mothers at the beginning and 72 at the end of the year.

In January and December 8 foster mothers received payments of 30/- weekly from the Health Committee and 21 children were assisted during the year by this arrangement which extends to sick mothers or widows and unmarried mothers who are unable to pay the full amount to a foster mother.

The number of approved foster mothers and particulars as to the number of children for whom they are authorised to care, are as follow :—

Approved for the care of 8 children	..	..	1	foster mother
„ „ „ 6 „ „ „	..	..	1	„ „
„ „ „ 4 „ „ „	..	..	1	„ „
„ „ „ 3 „ „ „	..	..	6	„ mothers
„ „ „ 2 „ „ „	..	..	10	„ „
„ „ „ 1 child	..	..	40	„ „
„ „ „ 1 child for 1 month			2	„ „
„ „ „ 1 „ 2 months			1	„ mother
„ „ „ 1 „ 3 „			12	„ mothers
„ „ „ 2 children for 3 months			2	„ „
Total			76	„ „

3 applications to act as foster mother were disapproved by the City Council.

At the beginning of the year 79 children were accommodated in a voluntary home ; 20 were admitted and 25 discharged during the year and there were 74 children in the home at the end of the year.

Adoptions.

333 applications were received from people wishing to adopt children. 53 of these prospective adopters cancelled their applications, 30 obtained children from another source, and 13 were considered unsuitable.

225 applications were received from mothers who wished to have their children adopted and 37 expectant mothers living outside the City made application before their babies were born but only 5 carried on with the adoption afterwards. 38 mothers decided to keep their babies, 12 cancelled their applications, 3 had their babies adopted through another source, and 7 children died.

180 children were introduced to adopters and 128 of them were legally adopted during 1947.

16 cases were notified under section 7 (3) of the Adoption of Children (Regulation) Act, 1939, and 45 cases were notified where the mother handed her child direct to the adopter.

During the year the Child Protection Visitors paid 1,304 visits in connection with adoptions.

28 homes were visited for approval at the request of Adoption Societies, one home being considered to be unsuitable.

Third party introductions are kept under constant supervision by the Child Protection staff, as in some cases after a child has been introduced and difficulties arise no one assumes responsibility. The adoptions which have been arranged privately between mother and adopter are also closely supervised. Often no steps are taken to obtain a legal adoption order until the visitor has impressed upon the adopter the necessity for giving the child security.

Care of Illegitimate Children and their Mothers.

The health visitor specially appointed for these duties acts as a liaison between the mother and the Health and Social Welfare Departments and voluntary organisations, from whom assistance can be obtained by the mother during pre-natal or post-natal periods.

The work increased during the year and the following particulars indicate the extent of the departments' activities in connection with the care of married and unmarried women and widows and their illegitimate children :—

Expectant mothers referred to Welfare Officer for advice and assistance	302
(single 226, married 62, widows 11, divorcees 3)	
Illegitimate children in need of assistance	484
Office interviews	830
Home visits	557
Interviews with social workers and others	48
Attendances at magistrates' courts	41

The 484 illegitimate children comprises—

183 children of mothers seen in the post-natal period only.

193 children of mothers seen in the pre-natal period during 1947.

45 children of mothers seen in the pre-natal period during 1946.

63 children whose cases were reported in previous years and re-investigated during 1947.

Home Circumstances of Illegitimate Children.

(a) Children remaining with their Mothers.

Mother	In lodgings or absorbed into family	With mother and putative father	With foster mother	With mother awaiting adoption	With mother in a hostel	Parents subsequently married	Deaths	Total
Single ..	211	32	15	2	2	8	20	290
Married ..	53	20	3	1	1	—	3	81
Widow ..	17	2	1	—	—	—	1	21
Divorcee ..	5	1	1	—	—	—	—	7
	286	55	20	3	3	8	24	399

(b) Children separated from their Mothers.

Mother	With adopters	In residential homes	In Booth Hall Hospital	Deaths	Total
Single	49	3	4	2	58
Married	21	3	2	—	26
Widow	—	1	—	—	1
Divorcee	—	—	—	—	—
	70	7	6	2	85

The Welfare Officer gave advice and assistance as follows :—

	No. of cases
Referred to and assisted by Social Welfare Committee	55
Admission to hospital arranged	31
Admission to hostels arranged	30
Pre-natal care arranged	10
Advised <i>re</i> adoption	44
Advised <i>re</i> affiliation orders	30
Assisted to find lodgings	20
Assisted to find employment	17
Children placed with foster mothers	16
Referred to Poor Man's Lawyer for legal aid	11
Assisted with baby clothes secured from voluntary organisations	83
Assisted with baby clothes secured from departmental sources	24
General advice and assistance	154

10 grandparents were persuaded to give mother and baby a home and regular visits were paid to 50 families who needed close supervision.

35 women and their babies were admitted to the Health Committee's Rose Hill Home pending suitable arrangements being made for them. Their average stay was 5 weeks.

50 single girls who were expecting illegitimate babies were admitted to a hostel belonging to a voluntary organisation. This hostel is also a maternity home and the mothers remain with their babies until other arrangements are made for them. The average period spent in the hostel by each case during 1947 was 13 weeks.

Recuperative Centre.

By an arrangement with the Community Council of Lancashire, mothers and children are admitted to Brentwood Recuperative Centre, Marple, Cheshire, on the recommendation of the Maternity and Child Welfare Section, the cost of maintenance being borne by the Health Committee.

10 mothers and 26 children were admitted to the Centre. The ages of the mothers ranged between 21 to 39 years and 24 children were under 5 years old. The families stayed at the Centre for periods from 1½ to 6 weeks duration. The families were visited by the health visitors a few days after discharge and revisited at frequent intervals.

The three primary reasons for recommending the mothers for admission to Brentwood are :—

- (1) Lack of training and experience in housewifery and child management ;
- (2) Ill-health and lowered vitality due to too rapid childbearing, depressing surroundings and environment, and possibly in the case of some mothers, malnutrition ;
- (3) Unsatisfactory home conditions, including lack of domestic facilities ;
- (4) Difficulties between parents, causing the mother to lose interest in her home and children.

Marked improvement in both mental and physical condition of the family is evident after a stay in Brentwood. In most cases the mothers look more alert and happy, find pleasure in household tasks, and the children benefit greatly from the training given in the Centre. By frequent visits from the health visitor it is hoped to maintain and still further improve the standard of living of these families.

Health Visiting.

The health visitors supervise generally the nutrition and development of children under school age, the health and welfare of their mothers, and the teaching of mothercraft. Their duties also include the investigation and following up of certain infectious diseases, scabies, and verminous conditions and health education. In December, 1947, the health visitors had under observation 54,383 children under 5 years of age.

Notification of Births.

The total number of notifications was 18,197 compared with 16,486 in 1946 and 13,449 in 1945. A number of these were notified by St. Mary's Hospital, Prestbury.

Source of Notification and Place of Birth.

Manchester		St. Mary's Hospital, Prestbury		Totals	
Live	Still	Live	Still	Live	Still
16,289	513	1,365	30	17,654	543

Total registered births numbered 16,257 and of these 1,093 were illegitimate.

It has been possible in 15,804 births (15,468 live births and 336 stillbirths) representing 97 per cent. of the total registered births in the City, to consider the place in the family of each birth, and this is shown in the following tables.

Full-time and premature births have been separated, the accepted standard birth weights of $5\frac{1}{2}$ lbs. or under for premature babies having been adopted in 1938,

Births investigated during 1947 to show place in family.

Place in Family	Live Births				Live Births		Still-births				Still-births		Live and Still-births
	Legitimate		Illegitimate		1947	1946	Legitimate		Illegitimate		1947	1946	
	Full time	Pre- mature	Full time	Pre- mature			Full time	Pre- mature					
					Per cent.	Per cent.			Per cent.	Per cent.			
1st	5,395	539	580	27	42.29	41.33	83	52	6	4	43.15	37.64	42.31
2nd	3,899	265	299	6	28.89	29.24	36	26	1	—	18.75	26.40	28.68
3rd	1,945	127	134	8	14.31	14.42	19	27	2	—	14.29	14.04	14.31
4th	930	58	64	3	6.82	6.89	25	9	—	—	10.13	6.46	6.89
5th	456	33	31	3	3.38	3.43	14	6	—	—	5.95	5.34	3.44
6th	248	24	20	—	1.89	1.97	5	2	—	—	2.08	2.81	1.89
7th	144	11	7	—	1.05	1.15	4	4	—	—	2.38	3.09	1.07
8th	84	1	7	—	.60	.71	1	2	—	1	1.19	1.41	.60
9th	46	6	2	—	.35	.44	1	—	—	—	.30	1.69	.35
10th	32	4	4	—	.25	.16	1	—	2	—	.89	.28	.27
11th	8	—	1	—	.06	.15	1	2	—	—	.89	.28	.08
12th	8	—	—	—	.05	.05	—	—	—	—	—	.56	.05
13th	5	—	—	—	.03	.05	—	—	—	—	—	—	.03
14th	3	—	—	—	.02	.01	—	—	—	—	—	—	.02
15th	1	—	—	—	.01	—	—	—	—	—	—	—	.01
Totals	13,204	1,068	1,149	47	100.00	100.00	190	130	11	5	100.00	100.00	100.00
				15,468				336					
												15,804	

It is interesting to compare the size of the average family and the age of the mother of each new investigated birth in 1947 as compared with 1935 when the analysis was first made. Tables for these two years are as follows :—

(1) Age of mothers at birth of children during 1947
showing place in family of each birth.

Age Groups Years	Place in Family															Total Births
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
15—	358	26	1	1	—	—	—	—	—	—	—	—	—	—	—	386
20—	2,644	930	211	28	8	1	—	—	—	—	—	—	—	—	—	3,822
25—	2,321	1,777	718	270	95	25	9	4	2	2	—	—	—	—	—	5,223
30—	868	1,123	731	406	185	102	55	18	10	3	1	1	—	—	—	3,503
35—	321	496	432	273	182	103	65	38	24	14	3	4	1	2	—	1,958
40—	72	111	117	81	62	61	34	30	17	17	3	3	3	—	1	612
45—	2	4	10	8	4	3	3	3	2	5	2	—	1	1	—	48
	6,586	4,467	2,220	1,067	536	295	166	93	55	41	9	8	5	3	1	15,552

(2) Age of mothers at birth of children during 1935
showing place in family of each birth.

Age Groups Years	Place in Family																			Total Births
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
15—	294	25	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	320
20—	1,617	718	184	39	9	1	1	—	—	—	—	—	—	—	—	—	—	—	—	2,569
25—	1,419	1,054	540	253	97	44	19	2	2	—	—	—	—	—	—	—	—	—	—	3,430
30—	489	627	486	337	207	140	74	50	17	7	5	1	—	—	—	—	—	—	—	2,440
35—	118	288	235	194	159	132	111	88	65	30	16	6	4	1	2	—	—	—	—	1,449
40—	18	40	50	68	69	53	53	40	31	32	18	6	7	5	1	1	1	—	1	494
45—	—	2	—	5	9	6	4	1	6	7	5	5	4	3	1	—	—	—	—	58
	3,955	2,754	1,496	896	550	376	262	181	121	76	44	18	15	9	4	1	1	—	1	10,760

The 1947 births are further analysed to show the difference between legitimate and illegitimate births and live and still-births.

Age of mothers at birth of live children during 1947.

(A) Place in family of each investigated birth (legitimate).

Age Groups Years	Place in Family															Total Births
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
15— ..	290	24	1	1	—	—	—	—	—	—	—	—	—	—	—	31
20— ..	2,361	865	197	27	8	—	—	—	—	—	—	—	—	—	—	3,458
25— ..	2,119	1,645	665	244	87	20	8	4	2	2	—	—	—	—	—	4,796
30— ..	780	1,044	685	476	164	95	51	16	10	3	1	1	—	—	—	3,326
35— ..	290	461	398	250	169	97	62	36	23	12	2	4	1	2	—	1,807
40— ..	64	94	107	75	56	57	32	27	15	14	2	3	3	—	1	550
45— ..	2	3	9	6	4	2	2	2	2	5	2	—	1	1	—	41
	5,906	4,136	2,062	1,079	488	271	155	85	52	36	7	8	5	3	1	14,294

(B) Place in family of each investigated birth (illegitimate).

Age Groups Years	Place in Family														Total Births
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
15—	79	2	—	—	—	—	—	—	—	—	—	—	—	—	81
20—	284	64	16	1	—	1	—	—	—	—	—	—	—	—	366
25—	184	127	52	22	7	6	1	—	—	—	—	—	—	—	399
30—	77	72	40	23	15	6	4	2	—	—	—	—	—	—	239
35—	22	29	31	16	12	4	2	2	1	2	1	—	—	—	122
40—	7	17	9	3	3	2	1	2	1	2	—	—	—	—	47
45—	—	1	1	2	—	1	—	1	—	—	—	—	—	—	6
	653	312	149	67	37	20	8	7	2	4	1	—	—	—	1,260

Age of mothers at birth of stillborn children during 1947.

(A) Place in family of each investigated stillbirth (legitimate).

Age Groups Years		Place in Family												Total Births
		1	2	3	4	5	6	7	8	9	10	11	12	
15—		2	—	—	—	—	—	—	—	—	—	—	—	2
20—		46	12	3	—	—	—	—	—	—	—	—	—	61
25—		46	19	13	7	3	—	1	—	—	—	—	—	89
30—		23	14	14	11	7	2	2	1	—	—	—	—	74
35—		14	11	10	10	4	2	3	—	—	—	1	—	55
40—		2	5	6	4	4	3	1	2	1	1	2	—	31
45—		—	—	—	—	—	—	1	—	—	—	—	—	1
		133	61	46	32	18	7	8	3	1	1	3	—	313

(B) *Place in family of each investigated stillbirth (illegitimate).*

Age Groups Years	Place in Family					Total Births
	1	2	3	8	10	
15—	2	—	—	—	—	2
20—	2	—	—	—	—	2
25—	4	1	—	—	—	5
30—	—	—	—	1	2	3
35—	1	—	1	—	—	2
40—	1	—	1	—	—	2
45—	—	—	—	—	—	—
	10	1	2	1	2	16

Stillbirths.

The number of stillbirths allocated to the health visitors for investigation was 336.

Found Children.

The health visitors found 1533, other children belonging to families which had moved into Manchester during the year. The year of their birth was as follows :—

516 born 1947.
 394 „ 1946.
 267 „ 1945.
 221 „ 1944.
 135 „ 1943.

Day-minded Children.

A register of children whose mothers go out to work and who are cared for by relatives or neighbours is maintained.

The average number of day-minded children on the register during the year was 177 and the number of applications received for day-minders was 104.

Deaths.

1,072 deaths occurred amongst children under 5 years of age.

The classification according to age is :—

953 children under 1 year.

65 „ 1—2 years.
 23 „ 2—3 years.
 16 „ 3—4 years.
 15 „ 4—5 years.

The distribution according to age of children who died under 1 year was as follows :—

Died under 1 day	Died 1 to 7 days	Died 1 week to 4 weeks	Died 1 month to 3 months	Died 3 months to 6 months	Died 6 months to 9 months	Died 9 months to 12 months	Total
138	131	199	191	172	80	42	953

The following table gives mortality rates for the past ten years amongst children 1—5 years. This is based upon the number of live births for the year.

**Infant Mortality Rate and Case Mortality Rates
for Measles and Whooping Cough.**

Year	Infant Mortality Rate	Mortality Rate 1—2 years	Mortality Rate 2—5 years	Mortality Rate 1—5 years	Total cases of Measles		Total known cases of Whooping Cough	
					Cases	Mortality Rate per cent	Cases	Mortality Rate per cent
1938 ..	69.03	9.8	11.5	21.3	9,949	.60	1,075	1.21
1939 ..	61.09	6.7	7.9	14.6	574	—	1,406	2.13
1940 ..	70.18	10.2	10.8	21.0	14,844	.19	670	1.04
1941 ..	84.47	10.6	16.3	26.9	3,869	.52	4,715	1.38
1942 ..	64.52	5.5	7.6	13.1	10,468	.16	1,103	1.45
1943 ..	60.88	5.9	6.8	12.7	4,419	.27	3,277	1.28
1944 ..	53.59	5.6	3.8	9.4	6,736	.13	2,003	1.30
1945 ..	55.80	3.7	6.0	9.7	5,596	.14	1,835	1.36
1946 ..	63.71	3.7	3.9	7.7	3,800	.08	2,265	1.41
1947 ..	59.76	4.1	3.4	7.5	9,008	.23	2,308	.78

**Infant and Child Mortality per 1,000 Births.
Quinquennial periods 1911—1947.**

Quinquennial Period	Infant Mortality	Child Mortality, 1—2 years	Child Mortality, 2—5 years
1911—1915	133.13	45.0	35.5
1916—1920	104.51	34.9	34.3
1921—1925	95.85	34.2	23.9
1926—1930	87.88	26.2	20.9
1931—1935	77.34	18.3	17.6
1936—1940	70.81	11.3	11.3
1941—1945	63.85	6.3	8.1
1946	63.71	3.7	3.9
1947	59.76	4.1	3.4

Expectant Mothers.

Health visitors also visited at the end of six months all mothers who had given birth to a still born child or to a child who had died before reaching the age of 1 month, in order to ensure adequate ante-natal care should she subsequently become pregnant. 445 still births and 474 neo-natal deaths occurred in the City during 1946 and 1,697 special visits were made by the health visitors during 1947 to these mothers. In this way 116 expectant mothers who might require special care were brought to the notice of the Department.

Causes of Deaths in Children under 1 year.

Manchester figures (52 weeks).

Ward	Deaths of children under 1 year	Bronchitis and Pneumonia	Prematurity	Debility and Marasmus	Dystocia	Enteritis	Convulsions	Tuberculosis	Syphilis	Accidental Deaths	Influenza	Measles	Whooping Cough	Other Causes
All Saints	43	7	8	2	—	11	—	1	—	3	—	—	1	10
Ardwick	42	10	6	—	—	13	—	1	—	1	—	2	—	9
Beswick	33	7	10	1	—	5	—	1	—	1	—	—	2	6
Blackley	26	4	3	—	—	3	—	—	—	1	—	1	—	14
Bradford	30	7	4	1	1	3	—	—	—	1	—	1	—	12
Cheetham	25	4	4	—	—	8	1	—	—	—	—	—	—	8
Chorlton-cum-Hardy	29	3	12	1	—	4	1	—	—	—	—	—	1	7
Collegiate	16	3	2	—	—	5	—	—	—	2	—	1	—	3
Collyhurst	23	8	2	1	—	4	2	—	—	2	—	1	1	2
Crumpsall	21	5	3	—	—	2	—	—	—	—	1	—	—	10
Didsbury	31	6	6	—	1	12	—	—	—	—	—	—	—	6
Gorton North	22	6	3	—	—	1	—	1	—	—	—	1	—	10
Gorton South	26	7	2	—	—	5	—	1	—	—	1	1	—	9
Harpurhey	26	8	3	1	1	5	—	—	—	—	—	—	1	7
Levenshulme	19	3	4	—	—	4	—	—	—	—	—	—	—	8
Longsight	25	4	7	—	—	4	—	—	—	1	—	—	—	9
Medlock Street	36	5	8	—	—	7	3	—	1	1	—	—	2	9
Miles Platting	25	2	2	—	—	6	—	—	—	2	—	1	—	12
Moston	36	4	6	1	—	11	—	—	—	2	—	—	1	11
Moss Side East	23	6	3	1	—	3	—	—	—	1	—	—	1	8
Moss Side West	15	2	4	1	—	3	—	1	—	—	—	—	—	4
New Cross	19	4	2	—	—	5	—	—	—	2	—	—	—	6
Newton Heath	28	10	3	—	—	4	1	—	—	—	—	—	—	10
Openshaw	27	5	7	—	—	8	1	—	—	—	—	1	1	4
Rusholme	27	6	7	—	—	5	—	1	—	—	—	—	—	8
St. Clement's	—	—	—	—	—	—	—	—	—	—	—	—	—	—
St. George's	44	6	8	—	1	11	—	—	1	2	—	1	1	13
St. John's	10	—	2	1	—	3	—	—	—	3	—	—	—	1
St. Luke's	56	12	10	—	—	20	2	—	2	3	—	—	—	7
St. Mark's	38	8	6	—	—	15	—	—	—	1	—	—	—	8
St. Michael's	28	7	4	—	—	8	—	—	—	1	—	—	—	8
Withington	50	7	15	—	—	10	—	1	—	4	—	—	—	13
Wythenshawe	54	4	18	—	—	17	—	1	—	—	—	—	—	14
Total	953	180	184	11	4	225	11	9	4	34	2	11	12	266

Welfare of Women and Children on Canal Boats.

The arrangements with regard to the provision of welfare services for women and children living on canal boats were reviewed in November, 1945.

The canal boats coming into Manchester remain at the tying-up places for varying periods, sometimes for only an hour or two and seldom for more than 3 days.

None of the Manchester canal carrying-companies allow women and children on board their boats, but they are to be found on a few "narrow" boats coming into the City.

Arrangements were made with an official of a canal carrying company at the main tying-up place to obtain advance information with regard to the composition of the crew of boats proceeding to the City. When it has been ascertained that there are women and children on board, the health visitor and canal boats inspector have visited the boat together. The health visitor has seen the children and has given the mother advice as to welfare services which are available to her and facilities for obtaining supplies of cod liver oil, orange juice, and vitaminised foods at the nearest welfare centre. The local welfare centre is situated only a short distance from the three tying-up places in the City. Visits made by health visitors have been comparatively infrequent because few boats have women and children on board. Nevertheless it is felt that the continuance of these arrangements has been fully justified.

Co-operation with School Health Service.

A report on every child reaching school age and known, on the health visitor's final visit, to be suffering from medical defect or to have an unsatisfactory family history, is referred to the School Health Department. 564 such summaries were sent during the year, classified as follows:—

Unsatisfactory condition in child	..	..	..	452
History of Tuberculosis in child	..	..	..	11
„ „ Tuberculosis in family	..	..	..	49
„ „ Rheumatism in child	..	..	..	9
„ „ Rheumatism in family	..	..	..	19
Unsatisfactory history in family	..	..	..	14
Total	..	..	..	<u>564</u>

Measles, German Measles, Whooping Cough, and Pneumonia.

Measles.

The Measles and Whooping Cough Regulations came into force in 1939. These provide for the notification by medical practitioners of all cases of measles and whooping cough to the Medical Officer of Health.

The investigation of infectious disease is directed towards securing good nursing for, and the isolation of, infected cases, preventing the spread of infection and more particularly reducing the risk to children under five years of age.

The following table shows the number of cases of measles during the last four epidemics with a comparison of the deaths of children under and over five years of age :—

Measles—Years 1940—1947 (inclusive).

Year	Cases of Measles			Deaths		
	Over 5 years	Under 5 years	Total	Over 5 years	Under 5 years	Total
1940 ..	5,400	9,444	14,844	6	22	28
1941 ..	1,425	2,444	3,869	—	20	20
1942 ..	3,773	6,695	10,468	3	14	17
1943 ..	1,240	3,179	4,419	—	12	12
1944 ..	2,146	4,590	6,736	—	9	9
1945 ..	1,305	4,291	5,596	—	8	8
1946 ..	1,153	2,647	3,800	—	3	3
1947 ..	2,441	6,567	9,008	1	19	20

Number of notifications of Measles.

Cases notified by doctors 7,653

Cases found by health visitors 1,355

Total number of cases 9,008

Total number of cases investigated.. .. 9,008

This is an increase of 5,208 compared with the previous year.

In addition 30 non-notified cases were found after complete recovery had been made and are classified as “late” cases.

The Health Committee has an arrangement with the Manchester and Salford District Nursing Institution for the nursing at home, where necessary, of children suffering from measles and its complications.

Incidence of Pneumonia in Measles.

	Total cases of Measles	Number complicated by Pneumonia	
		Nursed at home	Removed to hospitals
Recovered	8,976	50	74
Died	32	8	15
Total	9,008	58	89
Case mortality per cent.	0.35	13.79	16.85

German Measles.

All cases of German measles are notifiable, and only cases under 16 years of age are investigated by health visitors.

Cases notified	1,247
Cases investigated	992
Cases recovered.. .. .	1,246
Cases died	1

The total visits paid by the health visitors—1,698

Whooping Cough.

Cases notified	2,308
Cases investigated	2,308

In addition 25 cases were discovered after complete recovery had been made and were classified as “late ” cases.

The following table shows the incidence of pneumonia in whooping cough.

Incidence of Pneumonia in Whooping Cough.

	Total cases of Whooping Cough	Number complicated by Pneumonia	
		Nursed at home	Removed to hospitals
Recovered	2,289	18	55
Died	19	3	12
Total*.. .. .	2,308	21	67
Case mortality per cent.	0.82	14.28	19.40

Care of Aged and Infirm Persons.

(Section 34, Manchester Corporation (General Powers) Act, 1930.)

87 visits were paid to elderly persons referred to the Medical Officer of Health as suffering from serious infirmity and unable to provide themselves with proper care and attention. 73 have been under supervision, compared with 85 in 1946, and in each case arrangements were made for their care.

The conditions under which many of these elderly persons were found to be living were pitiable, and there is a need for the early attention of the Department to be drawn to such cases,

Patients recommended to hospital, for whom accommodation was not available.

During the year 73 such patients were referred to the health visitors for alternative arrangements to be made, compared with 277 during 1946. Nine cases had been recommended for admission to Crumpsall Hospital and 64 to Withington Hospital. Many, however, were seriously ill and were found to be living alone or to be without neighbourly help.

The following table shows the arrangements ultimately made by the health visitors :—

Crumpsall Hospital—

Number admitted to Crumpsall Hospital	4
,, ,, other hospitals	2
,, ,, Crumpsall Hospital (out- patients' department) ..	—
Number nursed at home by friends or neighbours or district nurse	3
Number who died before admission to hospital could be arranged	—
Total	<u>9</u>

Withington Hospital—

Number admitted to Withington Hospital ..	34
,, ,, other hospitals	1
,, nursed at home by friends or neighbours or district nurse	20
Number who died before admission to hospital could be arranged	9
Total	<u>64</u>

Persons treated for verminous conditions.

Year	Clinic	Males Adult	Females Adult	School Children	Children under 5	Total
1943 ..	Monsall	202	1,017	778	323	2,320
	Withington	1	58	52	25	136
						2,456
1944 ..	Monsall	431	1,205	1,088	434	3,158
	Withington	—	69	104	36	209
						3,367
1945 ..	Monsall	329	751	662	222	1,964
1946 ..	Monsall	205	532	532	157	1,426
1947 ..	Monsall	187	299	400	113	999

The Department has a scheme for supplying special steel combs at cost price to mothers. 96 steel combs were distributed compared with 346 during 1946.

Scabies.

The main source of notification of scabies is the Education Department, but many cases are brought to the notice of health visitors, either as contacts of those notified by the School Health Service or as new cases.

The source and number of notifications received during 1947 and the preceding years was as follows :—

Sources of Notification of Scabies.

	1943	1944	1945	1946	1947
School Health Service	2,806	2,282	1,670	1,494	986
Booth Hall Hospital and other Municipal Hospitals	253	120	73	57	16
General Practitioners	248	1,959	1,571	1,184	504
Centre Medical Officers	262	157	211	183	100
Health Visitors	5,326	3,043	1,842	1,132	375
Applied voluntarily	880	1,347	1,130	783	295
Skin Hospital	776	638	559	579	289
Discovered at Monsall	35	203	61	13	13
H.M. Forces	10	11	—	—	—
Salvation Army	10	13	—	1	1
Voluntary Hospitals	92	47	40	48	25
Social Welfare	—	—	4	6	9
Rest Centres	6	10	—	—	—
Tuberculosis Clinic and N.S.P.C.C.	6	3	—	—	—
Sanitary Section	2	1	2	—	—
Ministry of Labour	—	8	—	4	—
Ministry of Health	7	7	4	—	7
Business Houses	41	29	20	17	10
Day Nurseries	—	—	28	15	1
Total	12,950	9,878	7,215	5,516	2,631

The number of persons treated at Monsall and Withington Clinics is shown in the following table :—

Treatment for Scabies.

Year	Clinic	Males Adult	Females Adult	School Children	Children under 5	Total Persons
1943 ..	Monsall	1,748	3,869	1,791	1,586	8,994
	Withington	260	961	607	412	2,240
						} 11,234
1944 ..	Monsall	1,535	3,249	1,556	1,239	7,579
	Withington	389	1,389	878	560	3,216
						} 10,795
1945 ..	Monsall	1,313	2,951	1,309	1,052	6,625
1946 ..	Monsall	1,212	1,996	871	740	4,819
1947 ..	Monsall	523	794	313	359	1,989

Scabies is treated by two applications of an emulsion of benzyl benzoate with an interval of from one to four days between the first and second treatments.

The health visitors paid 2,762 visits to homes in which scabies occurred

Monsall Clinic provides a 12-hour service on Monday and Thursday of each week to suit the convenience of workers unable to attend during the day.

National Society for the Prevention of Cruelty to Children.

The Department is again indebted to this Society for assistance in dealing with certain difficult families. During the year help was sought in 16 cases, compared with 30 in 1946 and 47 in 1945.

Nursing Homes Registration.

(Public Health Act, 1936—Sections 187/192.)

At the end of the year there were 19 registered nursing homes in the City, of which 4 were registered for maternity patients, 7 for medical, 4 for maternity, medical and surgical, 1 for maternity and medical, 2 for surgical, and 1 for medical and surgical cases. 16 applications were received from voluntary hospitals for exemptions under Section 192 and all were granted.

All registered nursing homes were inspected at intervals during the year,

Home Helps and Domestic Helps Services.

A home help service is provided by the department for attendance at maternity cases or where there are children under school age in the household.

25 full time helpers are employed in the service and their duties include cleaning, washing, cooking, and shopping. 681 cases over a total period of 1,327 weeks were attended and in 137 cases the full fee was paid. In the remaining cases the charge was based on an assessment according to family financial circumstances.

The majority of applications are received at welfare centres, by midwives, and at the central office. 1,129 such applications were made during 1947 and 169 were subsequently withdrawn by the applicant.

A domestic helps service is provided by the department for attendance in cases of sickness.

25 full time helpers are employed in the service and the duties of the helpers and the fee normally charged for the service are identical with the home helps service. The workers in the two services are, in fact, interchangeable.

100 applications were received for domestic help, of which 7 were cancelled by the applicant and 93 cases were attended by helpers.

Domestic help cases are generally attended for longer periods than home help cases and where the demand for the latter service has exceeded the number of helpers available, domestic helpers have been sent to the cases.

Day Nurseries.

One of the Health Committee's 30 day nurseries was discontinued in July, 1947. The nursery was carried on in a requisitioned portion of a school building which was released to the school managers.

All available places numbering 1,449 in the 29 nurseries were fully occupied and each nursery continued to have a large waiting list of women desiring accommodation for their children from 7-0 a.m. to 6-30 p.m. At each nursery the children are provided with all necessary meals, nursing and medical care, and educational facilities.

The charge for admission was increased in November from 1/- to 1/6d. per child per day.

In co-operation with the Education Committee arrangements were continued in the municipal day nurseries for the training of nursery nurses.

Two day nurseries in the City are maintained by voluntary organisations who receive financial grants from the City Council. Both these nurseries continued to be fully occupied and received a great many further applications for admission of children.

A number of industrial concerns in the City have established day nurseries for the children of their workers. Whilst these nurseries are known to regional officers of the Ministry of Health there are no powers enabling either the Ministry or the local authority to exercise proper supervision.

Statutory powers are necessary to require registration, conformity with proper standards as to staff and buildings, and to enable local authorities to inspect day nurseries commenced in industrial and other establishments.

Work of Investigators.

In all cases where a charge to the public is made for Maternity and Child Welfare Services provided by the Health Committee, payment may be assessed according to financial circumstances of the applicant.

The Department's investigators made a total of 7,378 enquiries during 1947 with regard to applications for reduced payments for the services of home and domestic helps and midwives, for medical fees, and in connection with admissions to day nurseries, blind and deaf schools, and maternity homes.

Visits by Health Visitors, 1947.

Type or cause of visit	Number
Children, 0-1 years, primary visits	17,185
„ „ „ subsequent visits	24,897
„ 1-2 „	15,188
„ 2-3 „	14,407
„ 3-4 „	12,895
„ 4-5 „	16,061
„ 5-14 „	8,397
„ visits <i>re</i> removal to and from the City	4,451
„ over 5 years, nursed out	9
„ interviews with parent only	6,337
Persons over 14 years	8,264
Aged and infirm persons	87
Stillbirths, primary visits	345
„ subsequent visits	287
Neonatal deaths	321
Mothers, primary visits during pre-natal period	2,626
„ subsequent visits during pre-natal period	588
Unsatisfactory home circumstances	143
Scabies, primary visits	1,575
„ subsequent visits	1,187
Verminous conditions, primary visits	1,011
„ „ subsequent visits	410
Measles, primary visits	8,410
„ subsequent visits	8,898
German measles, primary visits	992
„ „ subsequent visits	706
Whooping cough, primary visits	1,937
„ „ subsequent visits	1,967
Pneumonia, primary visits	1,063
„ subsequent visits	711
Influenza, primary visits	13
„ subsequent visits	1
Infantile diarrhoea, investigations	2
Venereal disease, primary investigations, Defence Regulation 33B	1
„ „ subsequent investigations, Defence Regulation 33B	126
„ „ primary visits <i>re</i> other cases	27
„ „ subsequent visits <i>re</i> other cases	114
Diphtheria immunisation	144
Miscellaneous visits	10,535
Visits by student health visitors	24,150
Total	196,468

REPORT OF THE NURSING ORGANISER.

This office was established in the Health Department in January 1946. Miss W. M. L. Selmes, S.R.N., S.C.M., D.N. (LOND. UNIV.), is the Nursing Organiser and the administration is centred in Room 306, Health Department, Town Hall, Manchester.

The functions of this office include the following:—

Activities such as may be considered necessary to circularize information regarding the Hospital and Health Services.

Supervision of the general work of the Nursing Information Office.

Enquiries, personal and otherwise, are made to the Nursing Organisation Office, from parents, school-girls, potential nurses, and ex-service men, relating to every branch of nursing.

Many girls have been interviewed and referred to the Education Offices and successfully placed in the course for Nursery Students, the Pre-Nursing course at Whitworth Street Evening School, Day Nurseries and Hospitals.

Enquiries have also been received concerning many other branches of hospital service and as a result information has been compiled in the office regarding training in District Nursing, Midwifery Service, School Nursing and Industrial Nursing, Occupational Therapy courses for Hospital Administrators, Dietetics, Physiotherapy, Laboratory Technical Work, Hospital Almonry, etc.

The Nursing Office is frequently visited by members of the nursing profession from other parts of the country who require advice on nursing problems.

The services of the Nursing Organiser are also sought by the voluntary hospitals of Manchester and Salford. On one or two occasions the Nursing Organiser has been invited to address the nursing staff of the hospitals in Manchester and district on the Nurses Act, 1943, and nursing policy arising from Ministry of Health Circulars.

Pre-Nursing Courses.

The Nursing Organisation office has co-operated with the Education Department in the maintenance of pre-nursing courses for girls who wish to "bridge the gap" between leaving school and entering hospital. A part-time pre-nursing course covering two years is at present in progress at Whitworth Street Evening School and the Nursing Organiser is responsible for the curriculum and arranges educational visits to the City hospitals for practical demonstrations on nursing, special schools, Manchester Corporation Departments, the Central Library, etc. At the commencement of the pre-nursing course the class was visited by Mrs. B. A. Bennett, Ministry of Labour and National Service, London,

An interesting exhibit of the work of the pre-nursing course students formed part of an exhibition held at Whitworth Street Evening School.

The Nursing Organiser has, with the co-operation of the Education Department, visited various senior girls schools in the City and made contact with the headmistresses. She also talked to school-girls with a view to encouraging recruitment.

Sister Tutors Course—Manchester University.

The Nursing Organiser is Hon. Sister Tutor and Special Lecturer to the above course, a member of the Selection and Examination Committees.

Miss Selmes assists in the arrangement of the practical work of the student sister tutors during the course, observing their practical work, demonstrating to them principles of teaching in the hospital and attends with the examiners at the close of the course.

Intensive course of training for Ex-service Nursing Orderlies.

On October 20th, 1946, at the request of the Ministry of Health, an intensive course of training for ex-service nursing orderlies commenced at Crumpsall Hospital, Manchester, followed by a similar course at Withington Hospital. At the present time two further courses are in operation.

The Nursing Organisation office was responsible for the administrative arrangements in connection with these and has continued to give advice to the students, arranging external lectures on special subjects, etc.

Mobile Nursing Exhibition.

The Nursing Organisation office maintains an exhibition which has been shown in the Health Department, Manchester, the Central Library, Belle Vue, Whitworth Street Evening School for Domestic Economy and is constantly loaned to other local authorities. These local authorities include Blackpool, Bolton, Brighouse, Burnley, Cheadle (Cheshire), Macclesfield, Stoke-on-Trent, and Stretford.

The Nursing Organisation office also has models and photographs on nursing, displayed in a permanent exhibition at the Juvenile Employment Bureau, Deansgate, Manchester.

Liaison with other public bodies.

The Nursing Organiser has liaison with the Regional Nursing Office, Ministry of Health; Nursing Appointments Office, Ministry of Labour; Queen's District Nursing Association; British Federation of Social Workers; North-Western District Workers Educational Association and the British Red Cross Society.

The Nursing Organiser is a member of the Manchester, Salford, and Stretford Grammar Schools for Girls Employment Committee.

Part-time Nursing Recruitment.

A regional campaign to secure the recruitment of nursing staffs to hospitals, sanatoria and other establishment was launched by the Regional Officer of the Ministry of Health on April 18th, 1947. The Medical Officer of Health launched a supporting campaign for part-time nurses through the medium of radio and press announcements, public advertisements, exhibition of posters and distribution of explanatory leaflets. The work was centered in the Nursing Office and in response to the appeal over 1,500 applicants applied and were referred to the City hospitals.

Civil Nursing Reserve.

The Nursing Organisation office is still responsible to the Ministry of Health for the maintenance of the Civil Nursing Reserve in Manchester, until cessation, which will be on July 5th, 1948, when the records and register will be sent to the Regional Office, Ministry of Health.

	Full-time Mobile and Immobile	Part-time	Total
Trained Nurses	11	2	13
Assistant Nurses	24	4	28
Nursing auxiliaries	5	20	25
Totals	40	26	66

Emergency Class of the Civil Nursing Reserve.

The Nursing Organisation office still recruits ex-members of the Civil Nursing Reserve and other trained nurses for service in the event of an emergency, *e.g.*, a local or widespread epidemic, and maintains a register of such members in the office. The records of the emergency class will be sent to the Regional Office of the Ministry of Health immediately after the appointed day.

The membership of the emergency members class at present is as follows:—

	Full-time Mobile and Immobile	Part-time	Total
Trained Nurses	2	5	7
Assistant Nurses	—	4	4
Nursing auxiliaries	5	47	52
Totals	7	56	63

VENEREAL DISEASES.

During the year under review there has been a decrease in the number of new cases and also in the total attendances of persons at the Manchester Venereal Diseases Clinics.

The total number of persons attending the clinics in 1947 was 13,084, compared with 13,841 in 1946. Of this number, 5,078 were found to be suffering from conditions other than venereal disease, as compared with 5,692 the previous year.

The number of individuals with venereal disease attending for the first time was 3,486, compared with 4,223 in 1946.

Syphilis.

New cases of syphilis in males numbered 716 and in females 441, as against 853 and 558 respectively in the previous year.

Gonorrhoea.

New cases of gonorrhoea among males numbered 1,898 and among females 415, the comparable figures for 1946 being 2,275 and 526.

Discharges and Defaulters.

During the year 2,018 persons were discharged after undergoing the final tests of cure. On the other hand 966 persons ceased to attend before their courses of treatment were completed. Letters were sent to defaulters and many returned for treatment to the same or some other clinic, but the problem of dealing with these people remains a serious one.

Preventive Treatment Centre.

The Preventive Treatment Centre, opened at St. Luke's Hospital on 1st April, 1937, continues to perform useful work. This Centre treats men who have exposed themselves to possible infection and who present themselves within six hours of exposure at any hour of the day or night. In 1947 as many as 3,740 persons attended for treatment, for the most part during the night time and early hours of the morning. It is significant that no persons receiving this preventive treatment reported subsequently at any of the clinics with established disease.

Penicillin.

Penicillin treatment was given to 2,903 patients during the year ; the number treated in 1946 was 2,707.

Summary of Work Done at all the Centres during 1947.

	Syphilis		Soft Chancre		Gonorrhoea		Non-venereal or undiagnosed conditions		Totals		Totals
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1. Number of cases on 1st January under treatment or observation	1348	1019	5	—	1045	321	1143	471	3541	1811	5352
2. Number of cases removed from the register during any previous year which returned during the year under report for treatment or observation of the same infection	79	95	—	—	65	56	—	—	144	151	295
3. Number of cases dealt with for the first time during the year under report (exclusive of cases under Item 4) suffering from :—											
Syphilis, primary	427	71	—	—	—	—	—	—	427	71	498
„ secondary	150	224	—	—	—	—	—	—	150	224	374
„ latent in 1st year of infection*	31	20	—	—	—	—	—	—	31	20	51
„ all later stages	95	101	—	—	—	—	—	—	95	101	196
„ congenital	13	25	—	—	—	—	—	—	13	25	38
Soft Chancre	—	—	9	—	—	—	—	—	9	—	9
Gonorrhoea, 1st year of infection	—	—	—	—	1898	381	—	—	1898	381	2286
„ later	—	—	—	—	—	34	—	—	—	34	34
Non-venereal conditions	—	—	—	—	—	—	2176	1171	2176	1171	3347
Conditions remaining undiagnosed at 31st December	—	—	—	—	—	—	12	88	12	88	100
4. Number of cases dealt with for the first time during the year under report known to have received treatment for the same infection, or to have been under observation, at other Centres or Service Hospitals, or by General Practitioners approved under Ministry of Health Circular 2226	231	158	—	—	74	24	17	—	322	182	504
Totals of Items 1, 2, 3, and 4.	2374	1713	14	—	3082	823	3348	1730	8818	4266	13084
5. Number of cases discharged after completion of treatment and final tests of cure or after diagnosis as non-venereal	218	155	6	—	1395	244	2420	1254	4039	1653	5692
6(a). Number of cases which ceased to attend before completion of treatment and were, on first attendance, suffering from :—											
Syphilis, primary	74	41	—	—	—	—	—	—	74	41	115
„ secondary	81	132	—	—	—	—	—	—	81	132	213
„ latent in 1st year of infection*	4	5	—	—	—	—	—	—	4	5	9
„ all later stages	109	82	—	—	—	—	—	—	109	82	191
„ congenital	14	44	—	—	—	—	—	—	14	44	58
Soft Chancre	—	—	—	—	—	—	—	—	—	—	—
Gonorrhoea, 1st year of infection*	—	—	—	—	269	87	—	—	269	87	356
„ later	—	—	—	—	4	20	—	—	4	20	24
6(b). Number of cases under treatment or observation which died :—											
From the disease	—	—	—	—	—	—	—	—	—	—	—
From treatment	—	—	—	—	—	—	—	—	—	—	—
From other causes	4	2	—	—	—	—	—	—	4	2	6
7. Number of cases which ceased to attend after completion of treatment but before final tests of cure	113	91	2	—	260	91	—	—	375	182	557
8. Number of cases transferred to other Centres, or to institutions, or to care of private practitioners	215	86	—	—	135	50	—	—	350	136	486
9. Number of cases remaining under treatment or observation on 31st December	1542	1075	6	—	1019	331	928	476	3495	1882	5377
Totals of Items 5, 6, 7, 8, and 9. (These totals should agree with those of Items 1, 2, 3, and 4)	2374	1713	14	—	3082	823	3348	1730	8818	4266	13084

Summary of Work Done at all the Centres during 1947—*continued*.

	Syphilis		Soft Chancre		Gonorrhoea		Non-venereal or undiagnosed conditions		Totals		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals
Number of cases in the following stages of syphilis included in Item 6 which failed to complete one course of treatment of either penicillin or of arsenic and bismuth :—											
Syphilis, primary	29	22	—	—	—	—	—	—	29	22	51
„ secondary	43	49	—	—	—	—	—	—	43	49	92
„ latent in 1st year of infection*	2	4	—	—	—	—	—	—	2	4	6
„ all later stages	32	27	—	—	—	—	—	—	32	27	59
„ congenital	3	2	—	—	—	—	—	—	3	2	5
Number of attendances :—											
(a) for individual attention of the medical officers	28830	21983	48	—	9815	3981	5081	3411	43774	29375	73149
(b) for intermediate treatment, e.g., irrigation, dressing	2308	126	—	—	3212	2454	202	—	5722	2580	8302
Total Attendances	31138	22109	48	—	13027	6435	5283	3411	49496	31955	81451
In-patients :—											
(a) Total number of persons admitted for treatment during the year	43	26	—	—	12	2	—	—	55	28	83
(b) Aggregate number of “in-patient days” of treatment given	521	535	—	—	37	28	—	—	558	563	1121
Number of cases treated with penicillin	305	219	—	—	1981	334	Other Diseases		2350	553	2903
							M.	F.			
							64	—			
Number of cases of congenital syphilis in Item 3 above, classified according to age periods	Under 1 year		1 and under 5 years		5 and under 15 years		15 years and over		Totals		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
	—	6	—	2	1	3	12	14	13	25	
Pathological Work :—	Microscopical		Cultural		Serum		Cerebro-spinal fluid		Others for diagnosis of Venereal Disease		
	for Syphilis	for Gonorrhoea	for Gonorrhoea		for Syphilis	for Gonorrhoea					
(a) Number of specimens examined at, and by the medical officer of, the Treatment Centre	423	8241	—		201	—	—		—		
(b) Number of specimens from patients attending at the Treatment Centre for examination to an approved laboratory	12	2797	—		7574	734	7		1371		

* “Syphilis, latent in 1st year of infection,” applies to cases presenting no clinical sign of syphilis but discovered (by blood test, etc.) to have contracted this disease within the preceding 12 months.

Health Education.

Associations and societies have again been active in bringing to the notice of their members many pamphlets on health matters and lectures have been given by members of the staff and others to organised groups.

“ Better Health ” continues to be distributed through many avenues where large numbers of people may be reached and it is well known to the department that this journal satisfies a need and supplements the information given in many of the useful pamphlets issued by the Central Council for Health Education.

Regulation 33B.

During 1947, 52 cases were notified but it was found impossible to investigate some of the notifications owing to the lack of information. The health visitors made 267 visits in connection with these cases, mostly with good results. It was unnecessary to take court proceedings in any one case this year.

WELFARE OF THE BLIND.

The Health Department is indebted to Mr. John W. Turner, the Superintendent and Secretary of the Manchester and Salford Blind Aid Society, for the following analysis and summary of the Register for the twelve months ended March 31st, 1948, the classification of cases of blindness certified and registered, and also for a summary of statistics for the ten years 1939 to 1948.

Blind persons over the age of 16 are dealt with by the Blind Persons' Welfare Committee, the Education Committee being responsible for the fees for training. The training of a blind person is subject to the approval of the Minister of Labour and National Service under the provisions of the Disabled Persons (Employment) Act, 1944.

The technical training of young persons, and the employment of blind persons who are capable of work are provided for in the workshops at Henshaw's Institution for the Blind, Old Trafford, under the guidance of Mr. C. B. Fox, Secretary and Superintendent. Brushes, baskets, mats, knitwear, boot and shoe making and repairing, etc., are made and carried out in these workshops and there are approximately 180 workers engaged.

There are 18 Home Workers dealt with by the Institution under an approved scheme and they receive direct augmentation of earnings. The workers engaged in the workshops receive augmentation of earnings to bring their weekly rate of pay in line with that of the lowest paid non-technical Corporation workman, provided basic earnings calculated over a four-week period are achieved.

The certification of blind persons is carried out by Dr. H. V. White, M.C., and Dr. H. H. McNabb is the referee in accordance with the provisions of the Blind Persons Acts.

Financial assistance is granted to necessitous blind persons who are registered as being ordinarily resident within the City. The grants awarded are taken, where necessary, to the homes of the people by the Home Teachers of the Manchester and Salford Blind Aid Society, who also teach the Braille and Moon methods; the Blind Aid Society also assist them with pastimes and occupations and attend to their comfort and welfare generally. The average number of visits made per month is 1,800.

Homes for the aged men and women and those incapable of work are provided by the two voluntary agencies as follows :—

One home at Rhyl for approximately	}	Provided by Henshaw's Institution for the Blind.
24 males		
One Home at Prestbury for	}	Provided by the Manchester and Salford Blind Aid Society.
approximately 23 females ..		
Two homes at Pendleton for men	}	Provided by the Manchester and Salford Blind Aid Society.
and women		
One holiday home at Southport for	}	Provided by the Manchester and Salford Blind Aid Society.
men and women		

During the year 92 new cases of blindness have been registered, 77 of these were over 50 years old. Out of a total of 1,173 cases on the register the number of blind children under 16 years old is 17 only, of whom 4 are infants under the age of 5 years.

The following analysis and summary of the register for the 12 months ended 31st March, 1948, and the classification of cases and cases of blindness were submitted to the City Council through the Blind Persons' Welfare Committee by the Manchester and Salford Blind Aid Society :—

Summary of Register of Blind Persons for 1947/48.

	Twelve months ended 31st March, 1948		Twelve months ended 31st March, 1947	
Number of cases on register	1,159		1,167	
<i>Add—</i>				
Number of new cases	92		79	
Removals into area	34		27	
Cases re-certified	—		5	
	1,285		1,278	
<i>Deduct—</i>				
Number of deaths	86		90	
Removals out of area	26		26	
Cases de-certified	—		3	
	—		—	
	112		119	
	1,173		1,159	
	Males	Females	Males	Females
	573	600	582	577

Registration Statistics of Blind Population.

	At 31st March 1946	At 31st March, 1947
ANALYSIS OF REGISTER.		
<i>Children:—</i>		
Under 5 years of age	4	4
5 to 16 years of age :—		
At School	12	10
Not at School	1	—
<i>Adults over 16 years of age :—</i>		
Under training	20	18
Not training, but trainable	2	1
Trained, but unemployed	—	—
Employed at Blind Institutions or elsewhere ..	192	190
Unemployable	942	936
	1,173	1,159
2. AGE PERIODS.		
0—5 years	4	4
5—16	13	10
16—21	15	15
21—40	152	153
40—50	130	131
50—60	183	189
60—65	125	119
65—70	120	126
70—80	273	279
80—90	144	132
90 and over	14	10
	1,173	1,159

**Classification of cases of Blindness Certified and Registered,
from 1st April, 1947 to 31st March, 1948.**

	Males	Females	Total
New cases from 1st April, 1947, to 31st March, 1948 ..	38	54	92
Cases re-certified	—	—	—
12 males receiving B.P.S./D. Grants	67 Grants ..		
5 females „ B.P.S./D. „			
13 males „ B.W.C. „			
37 females „ B.W.C. „			
Number of deaths during the twelve months	49	37	86

New Cases	Ages at which Blindness occurred			Present Age Period		
	Males	Females	Total	Males	Females	Total
Age Periods						
0— 1	—	1	1	—	—	—
1— 5	—	1	1	—	1	1
5—10	1	2	3	—	2	2
10—20	1	1	2	2	1	3
20—30	2	1	3	1	—	1
30—40	1	—	1	1	—	1
40—50	5	1	6	6	2	8
50—60	6	6	12	4	3	7
60—70	6	13	19	8	13	21
70—80	16	28	44	10	20	30
Over 80.. .. .	—	—	—	6	12	18
	38	54	92	38	54	92

Single	10	11	21
Widowed	9	29	38
Married and separated	2	3	5
Married.. .. .	17	11	28

	38	54	92
--	----	----	----

Physically and Mentally Defective.

Mental	—	—	—
Deaf	—	4	4
Physical	—	—	—
Mental and Deaf	—	—	—
Deaf and Physical	—	—	—
	—	4	4

Manchester.
Causes of Blindness.

Section	Sub-sections	Males	Females	Total
A. Congenital and Undetermined Causes	1. Congenital, hereditary, and developmental defects	1	1	2
	2. Myopic Error	4	4	8
	4. Glaucoma, primary	5	6	11
	5. Cataract, primary	8	20	28
	6. Primary detachment of Retina	—	3	3
	9. Atrophy of Optic Nerve	—	1	1
	7. Tumour	—	1	1
B. Infectious and Bacterial	3. Syphilis :—			
	(a) Congenital	—	2	2
	(b) Acquired	—	—	—
	4. Trachoma	—	—	—
	8. Tuberculosis	—	1	1
C. Traumatic and Chemical	12. Secondary infection following operation	2	—	2
	2. Trauma :—			
	(a) Non-industrial	2	—	2
	(b) War	2	—	2
D. General Diseases	2. Vascular diseases, including cerebral vascular lesions	7	6	13
	5. Intercranial neoplasm	—	1	1
E. No information obtainable	—	7	8	15
		38	54	92

Further, 44 cases were examined but found not to be blind within the meaning of the Blind Persons Act, 1920.

Summary of Statistics for the last ten years (1939—48).

Year ended 31st March	Total on Register	New Cases Registered during the year	Cases Re-certified	Deaths	Cases De-certified	Transfers	
						Into Area	Out of Area
1939 ..	1,302	141	—	108	4	33	32
1940 ..	1,263	91	1	114	4	37	50
1941 ..	1,253	92	1	98	2	42	45
1942 ..	1,235	87	2	91	2	26	40
1943 ..	1,222	80	1	102	4	31	19
1944 ..	1,199	64	2	98	5	35	21
1945 ..	1,179	77	1	104	5	32	21
1946 ..	1,167	72	1	86	2	32	29
1947 ..	1,159	79	5	90	3	27	26
1948 ..	1,173	92	—	86	—	34	26

SANITARY SECTION.

By J. Lawson, M.R.San.I., Chief Sanitary Inspector.

STAFF.

J Lawson, M.R.SAN.I	..	..	..	..	..	..	..	Chief Sanitary Inspector	
A. Denman, M.R.SAN.I...	..	..	..	..	..	..	..	Deputy Chief Sanitary Inspector	
Divisional Inspector	..	..	..	..	..	..	..	..	1
Sampling Officers	..	..	..	..	..	..	..	..	3
Milk and Dairies Inspectors	..	..	..	..	..	..	..	..	3
Drainage Inspectors	..	..	..	..	..	..	..	..	2
Smoke Inspectors	..	..	..	..	..	..	..	..	4
Canal Boat and Rag Flock Inspector						..	..	..	1
Drainage Branch Inspectors	..	..	..	..	..	..	..	..	2
Female Inspectors	..	..	..	..	..	..	..	..	2
District Inspectors	..	..	..	..	..	..	..	..	57
									77
Vacancies, 31st December, 1947	..	..	..	..	..	..	..	..	34
Harold Moore	..	..	..	..	..	..	..	..	Senior Administrative Assistant
Clerks and typists	..	..	..	..	..	..	..	..	28

General.

The work of the Inspectorial staff is concerned largely with environmental hygiene in the home, shop, office or factory; the purity and cleanliness of food, and the prevention of atmospheric pollution, and, under normal conditions, the administration of the manifold statutory and other responsibilities in these fields of activity is so planned as to preserve a balance between preventive and remedial action. It continues to be necessary, however, to direct the activities of the staff—still seriously depleted in numbers—to matters arising from an increasing volume of complaints received from the public.

During 1947, 22,708 complaints were received against 16,196 in 1946 and 10,104 in 1938. Complaints now relate mainly to conditions arising from structural and sanitary defects in dwelling-houses, many of which are within potential clearance areas and remain occupied only by reason of the serious shortage of housing accommodation.

The large volume of complaints and the increased amount of work involved in subsequent remedial action, which is prolonged by the difficult position as to labour and materials, has created a position in which many statutory duties designed to prevent the development of unhygienic conditions cannot adequately be fulfilled. It is evident that in many instances, the accumulated defects in dwelling-houses discovered on inspection have developed as a result of owners

failing to execute systematic maintenance of a preventive character to dwelling-house property and it is suggested that the high cost of repairs in the post-war period cannot be overlooked as an economic factor in this connection. Cases have come to light in which owners have ceased to collect the rents of their houses, apparently with a view to escaping their liability for repairs, leaving the tenants to pay rates and other charges on the property.

Although the Inspectors have been occupied mainly in dealing with the above-mentioned conditions and circumstances, the supervision of premises in which food is prepared has been maintained as an urgent measure and proceedings have been instituted in certain cases in which unsatisfactory conditions were disclosed.

The hygienic control of milk production and distribution in the City and of ice cream manufacture and sale has also received prior attention, together with the prevention of adulteration and misrepresentation of food and drugs.

Action was taken during the year to implement further the provisions of the Manchester Corporation Act, 1946, and reference is made later in this report to this and other aspects of the work of the Section.

The work of the section has been accomplished under more than usually harassing circumstances during the year and the depleted inspectorial staff have carried out their exacting statutory duties with creditable zeal and with due appreciation of the problems and difficulties of the various sections of the public with whom their activities are so intimately concerned.

Supervision of Food.

Prevention of Adulteration.

The protection of the public against the adulteration of food is especially important at a time when supplies are limited and the departmental functions concerned with the prevention of adulteration or misrepresentation of food and drugs were carried out actively throughout the year.

The work was directed to the main constituents of the average household dietary and to medicines and drugs, the articles concerned being preponderantly of a wholly edible type or in a prepared state for consumption or use and were of a kind which may have been subjected to fraudulent or deceptive practice.

Foods to which statutory compositional standards are applicable and those without such standards were sampled systematically.

In view of the importance of the nutritive properties of milk and the increased consumption of this valuable food, close supervision was exercised and 1,263 samples were obtained from individual farmers, bulked milk supplied to city dairymen, or from retailers in the City.

The examination of these samples by the Public Analyst disclosed that 185, or 14.64 per cent., were adulterated or failed to comply with the legal presumptive standard of 3 per cent. fat content and 8.5 per cent. non-fatty solids and constituted a slight increase in the incidence of adulteration, etc., over that recorded in 1946.

The adulterations and irregularities were mainly of a minor character and these were dealt with by cautioning the person concerned; legal proceedings were instituted in 26 more serious cases and fines amounting to £100 were imposed, all the defendants involved being producers of milk outside the City. The examination of milk as to the effectiveness of heat treatment and keeping quality is dealt with later in this report.

An unusual form of contravention of the Food and Drugs Act was found in the disclosure of the use of hydrocarbon oil as a "fat extender" in the manufacture of cakes, and legal proceedings were instituted against two bakers in the City, penalties being imposed in both cases.

The absence of a statutory standard of composition for ice cream, which is also exempted from the requirements, as to ingredients, of the Labelling of Food Order, is reflected in the wide variation in nutrient content revealed by the analysis of 12 samples of this commodity. The amount of fat contained in these samples ranged from 0.07 per cent. to 12.20 per cent.; 5 samples had less than 1.0 per cent. fat whilst the fat content of the remaining 7 was 2.94 per cent., 3.95 per cent., 4.59 per cent., 7.16 per cent., 72.1 per cent., 11.44 per cent., and 12.20 per cent.

Variation of Fat Content of Milk sampled during 1947.

(Sale of Milk Regulations, 1939 Fat standard 3.0 per cent.)

Milk from producers and depots on arrival at Manchester dairies, etc.		Milk sold by dairymen in Manchester	
Fat Percentage	No. of Samples	Fat Percentage	No. of Samples
Less than 2%	1	Less than 2%	0
2—2.49%	12	2—2.49%	0
2.5—2.99%	98	2.5—2.99%	6
3.0—3.24%	234	3.0—3.24%	100
3.25—3.49%	186	3.25—3.49%	148
3.5—3.74%	164	3.5—3.74%	87
3.75—4.0%	123	3.75—4.0%	13
More than 4%	85	More than 4%	6
	903		360

NOTE :—Most of the milk retailed in the City is bulked before distribution.

**Composition of Milk Samples analysed in connection with the
Sale of Milk Regulations, 1939.**

Year	No. of Samples	Average Fatty solids per cent.	Average Non-fatty solids per cent.	Average Total solids per cent.
1943	1,449	3.45	8.67	12.12
1944	1,534	3.49	8.75	12.24
1945	1,491	3.44	8.78	12.22
1946	1,528	3.48	8.74	12.22
1947	1,263	3.40	8.71	12.11
Requirements of the Sale of Milk Regulations, 1939	—	3.00	8.50	11.50

Legal proceedings were instituted in connection with adulterated samples as follows :—

Article	Nature of irregularity	No. of summons	Result of legal proceedings
Milk	Added water	25	Defendants convicted in 23 cases and fines amounting to £98 imposed. The other 2 cases were dismissed on payment of costs.
Milk	Added water and deficient in fat	1	Defendant convicted and fined £2.
Cake, sweet	Contained hydrocarbon oil	2	Defendants convicted and fined £10 each.
Whisky	Contained excess of water	1	Defendant convicted and fined £10.
Rum	Contained excess of water	1	Defendant convicted and fined £10.
Wines	Were not wines and were improperly labelled	2	} Cases against retailers dismissed. Proceedings pending against manufacturers.
Cocktails	Was not a cocktail and was improperly labelled	1	

Proceedings under the Provisions of the Food and Drugs Act, 1938.

Informal Samples		Article	Statutory Samples			Prosecutions					
Obtained	Adulterated		Obtained	Adulterated	Cautioned, adulteration slight	Summoned	Fined	Ordered to pay costs only	Dismissed or Withdrawn	Amount of fines	Amount of costs
2	—	Acid, Boric	—	—	—	—	—	—	—	£ s. d.	£ s. d.
3	—	Apples	—	—	—	—	—	—	—	—	—
—	—	Arrowroot.....	2	—	—	—	—	—	—	—	—
29	—	Bacon and Ham.....	8	—	—	—	—	—	—	—	—
11	—	Baking Powder	7	—	—	—	—	—	—	—	—
1	—	Barley	14	—	—	—	—	—	—	—	—
10	—	Biscuits.....	7	—	—	—	—	—	—	—	—
2	—	Borax	2	—	—	—	—	—	—	—	—
1	—	Borax and Honey	—	—	—	—	—	—	—	—	—
1	—	Brawn	21	—	—	—	—	—	—	—	—
12	—	Bread	18	—	—	—	—	—	—	—	—
4	—	Breakfast Cereals	44	—	—	—	—	—	—	—	—
9	—	Butter	35	—	—	—	—	—	—	—	—
28	1	Cakes, Sweet	57	2	—	2	2	—	—	20 0 0	—
1	—	Camphor	—	—	—	—	—	—	—	—	—
1	—	Camphor, Spirit of.....	—	—	—	—	—	—	—	—	—
—	—	Cascara Extract	2	—	—	—	—	—	—	—	—
1	—	Charcoal Biscuits	—	—	—	—	—	—	—	—	—
19	—	Cheese	22	—	—	—	—	—	—	—	—
2	—	Cinnamon, Ground.....	—	—	—	—	—	—	—	—	—
12	—	Cocoa	24	—	—	—	—	—	—	—	—
5	—	Coffee	22	—	—	—	—	—	—	—	—
19	—	Coffee and Chicory extract ..	1	—	—	—	—	—	—	—	—
31	—	Cooking Fat	1	—	—	—	—	—	—	—	—
—	—	Cornflour	3	—	—	—	—	—	—	—	—
1	—	Cream, Synthetic	—	—	—	—	—	—	—	—	—
3	—	Curry Paste and Powder	—	—	—	—	—	—	—	—	—
8	—	Custard Powder	4	—	—	—	—	—	—	—	—
6	—	Effervescing Salts	1	—	—	—	—	—	—	—	—
4	—	Eggs, Dried	5	—	—	—	—	—	—	—	—
5	—	Epsom Salts	2	—	—	—	—	—	—	—	—
21	—	Essences, Flavouring	—	—	—	—	—	—	—	—	—
3	—	Figs, Syrup of	—	—	—	—	—	—	—	—	—
59	—	Fish, Tinned	—	—	—	—	—	—	—	—	—
30	—	Fish Paste, Prepared.....	6	—	—	—	—	—	—	—	—
2	—	Flour	13	—	—	—	—	—	—	—	—
25	—	Flour, Self-raising	24	—	—	—	—	—	—	—	—
4	—	Fruit, Tinned	—	—	—	—	—	—	—	—	—
12	—	Fruits, Dried	40	—	—	—	—	—	—	—	—
12	—	Fruit Juice, Tinned	—	—	—	—	—	—	—	—	—
3	—	Gelatine	4	—	—	—	—	—	—	—	—
3	—	Ginger, Ground	1	—	—	—	—	—	—	—	—
1	—	Glucose	—	—	—	—	—	—	—	—	—
1	—	Glauber's Salt	2	—	—	—	—	—	—	—	—
1	—	Glycerine	3	—	—	—	—	—	—	—	—
1	—	Grape Purée	—	—	—	—	—	—	—	—	—
16	1	Gravy Browning.....	1	1	1	—	—	—	—	—	—
—	—	Gregory Powder	1	—	—	—	—	—	—	—	—
15	—	Herbs, Dried	1	—	—	—	—	—	—	—	—
4	—	Honey	3	—	—	—	—	—	—	—	—
14	—	Ice Cream	—	—	—	—	—	—	—	—	—
2	—	Invalid Food	—	—	—	—	—	—	—	—	—
1	—	Iodine, Tincture of	3	—	—	—	—	—	—	—	—
10	—	Jam	49	—	—	—	—	—	—	—	—
13	—	Jellies, Table	2	—	—	—	—	—	—	—	—
4	—	Lard	1	—	—	—	—	—	—	—	—
2	—	Lemon Curd	1	—	—	—	—	—	—	—	—
10	—	Lemonade Crystals.....	—	—	—	—	—	—	—	—	—
—	—	Liquorice, Compound Powder of	1	—	—	—	—	—	—	—	—
1	—	Lint, Boric	—	—	—	—	—	—	—	—	—
—	—	Macaroni	11	—	—	—	—	—	—	—	—
2	—	Magnesia	—	—	—	—	—	—	—	—	—
6	—	Malt Extract	—	—	—	—	—	—	—	—	—
5	—	Malt and Oil, Extract of....	—	—	—	—	—	—	—	—	—
3	—	Malt Sprcad.....	—	—	—	—	—	—	—	—	—
10	—	Margarine.....	39	—	—	—	—	—	—	—	—
10	—	Meat Extract	—	—	—	—	—	—	—	—	—
20	—	Meat, Tinned	1	—	—	—	—	—	—	—	—
32	—	Meat Paste, Prepared	25	—	—	—	—	—	—	—	—
589	2	Carried forward	534	3	1	2	2	—	—	20 0 0	—

Proceedings under the Provisions of the Food and Drugs Act, 1938—continued.

Informal Samples		Article	Statutory Samples			Prosecutions					
Obtained	Adulterated		Obtained	Adulterated	Cautioned, adulteration slight	Summoned	Fined	Ordered to pay costs only	Dismissed or Withdrawn	Amount of fines	Amount of costs to be paid
589	2	Brought forward ..	534	3	1	2	2	—	—	£ 20 s. 0 d. 0	£ — s. — d. —
9	—	Medicated Lozenges	11	—	—	—	—	—	—	—	—
6	—	Medicated Tablets	11	—	—	—	—	—	—	—	—
24	—	Medicines, Patent	1	—	—	—	—	—	—	—	—
1877	175	Milk	820	142	116	26	24	2	—	100 0 0	24 7 6
16	—	Milk, Condensed	—	—	—	—	—	—	—	—	—
18	—	Milk, Dried	2	—	—	—	—	—	—	—	—
2	—	Mincemeat	4	—	—	—	—	—	—	—	—
10	—	Mustard	7	—	—	—	—	—	—	—	—
3	—	Nutmeg, Ground	—	—	—	—	—	—	—	—	—
—	—	Oatmeal	21	—	—	—	—	—	—	—	—
2	—	Oil, Camphorated	2	—	—	—	—	—	—	—	—
4	—	Oil, Castor	2	—	—	—	—	—	—	—	—
2	—	Oil, Cod Liver	4	—	—	—	—	—	—	—	—
1	—	Oil, Eucalyptus	2	—	—	—	—	—	—	—	—
3	—	Oil, Olive	1	—	—	—	—	—	—	—	—
7	—	Oil, Paraffin	2	—	—	—	—	—	—	—	—
1	—	Oil, Salad	—	—	—	—	—	—	—	—	—
1	—	Ointment, Boric	—	—	—	—	—	—	—	—	—
1	—	Ointment, Fullers Earth	—	—	—	—	—	—	—	—	—
3	—	Ointment, Zinc	—	—	—	—	—	—	—	—	—
1	—	Parrish's Food	—	—	—	—	—	—	—	—	—
1	—	Peas and Beans	20	—	—	—	—	—	—	—	—
2	—	Pepper	2	—	—	—	—	—	—	—	—
37	1	Pickles	21	—	—	—	—	—	—	—	—
3	—	Pills	—	—	—	—	—	—	—	—	—
2	—	Pudding Mixture	1	—	—	—	—	—	—	—	—
22	—	Puddings, Tinned	—	—	—	—	—	—	—	—	—
1	—	Quinine, Ammoniated Tincture of	—	—	—	—	—	—	—	—	—
5	—	Rennett Extract	—	—	—	—	—	—	—	—	—
1	—	Rose Hip Syrup	1	—	—	—	—	—	—	—	—
2	—	Saccharin Tablets	—	—	—	—	—	—	—	—	—
18	—	Salt	—	—	—	—	—	—	—	—	—
33	1	Sauces	—	—	—	—	—	—	—	—	—
8	—	Sausages	54	—	—	—	—	—	—	—	—
1	—	Seidlitz Powders	—	—	—	—	—	—	—	—	—
1	—	Semolina	17	—	—	—	—	—	—	—	—
4	—	Soda, Bicarbonate of	—	—	—	—	—	—	—	—	—
4	—	Soup, Dried	—	—	—	—	—	—	—	—	—
27	—	Soup, Tinned	—	—	—	—	—	—	—	—	—
3	—	Soya Flour	4	—	—	—	—	—	—	—	—
2	—	Spaghetti	1	—	—	—	—	—	—	—	—
3	—	Spices, Ground	1	—	—	—	—	—	—	—	—
—	—	Squills, Syrup of	3	—	—	—	—	—	—	—	—
15	—	Stuffing, Dried	—	—	—	—	—	—	—	—	—
4	—	Suet	—	—	—	—	—	—	—	—	—
9	—	Sugar	58	—	—	—	—	—	—	—	—
17	—	Sweets	26	—	—	—	—	—	—	—	—
1	—	Sweetening Tablets	—	—	—	—	—	—	—	—	—
1	—	Tartar, Cream of	1	—	—	—	—	—	—	—	—
1	—	Tea	35	—	—	—	—	—	—	—	—
3	—	Treacle	—	—	—	—	—	—	—	—	—
1	—	Tripe	8	—	—	—	—	—	—	—	—
10	—	Vegetables, Dried	—	—	—	—	—	—	—	—	—
46	—	Vegetables, Tinned	—	—	—	—	—	—	—	—	—
8	—	Vegetables and Meat, Tinned	—	—	—	—	—	—	—	—	—
13	—	Vinegar	36	—	—	—	—	—	—	—	—
1	—	Water, Distilled	—	—	—	—	—	—	—	—	—
1	—	Yeast	—	—	—	—	—	—	—	—	—
4	—	Yeast Extract	—	—	—	—	—	—	—	—	—
1	—	Zinc and Boric Powder	—	—	—	—	—	—	—	—	—
13	—	Beer	11	—	—	—	—	—	—	—	—
—	—	Brandy	1	—	—	—	—	—	—	—	—
3	—	Cider	—	—	—	—	—	—	—	—	—
1	1	Cocktails	1	1	—	1	—	—	†1	—	—
4	—	Cordials	22	3	3	—	—	—	—	—	—
—	—	Gin	4	—	—	—	—	—	—	—	—
1	—	Lime Water	—	—	—	—	—	—	—	—	—
—	—	Rum	6	1	—	1	1	—	—	10 0 0	—
18	—	Water, Aerated	14	—	—	—	—	—	—	—	—
—	—	Whisky	4	1	—	1	1	—	—	10 0 0	—
1	1	Wines	16	2	—	2	—	—	†2	—	—
2937	181		1792	153	120	33	28	2	3	140 0 0	24 7 6

† Dismissed, costs against Corporation £7 7s. 0d.

Public Health (Preservatives in Food) Regulations, 1925–1927.

All samples governed by the Regulations were examined by the Public Analyst for evidence of preservatives. Four cases were found to contravene the Regulations.

A sample of gravy browning was found to contain benzoic acid and was improperly labelled. The manufacturers and the vendors were cautioned.

Informal samples of sauce and pickles were found to contain sulphur dioxide.

Public Health (Condensed Milk) Regulations, 1923–1927.

Public Health (Dried Milk) Regulations, 1923–1927.

Samples of condensed milk examined	16
Samples of dried milk examined	20

Artificial Cream—Section 28, Food and Drugs Act, 1938.

Registered premises	2
Visits to registered premises	2

The Synthetic Cream (Restriction) Order, 1940, made by the Minister of Food came into force on 9th December, 1940, and prohibited the manufacture of artificial cream.

Registration of Factories and Wholesale Premises.

Section 34, Food and Drugs Act, 1938.

(a) Margarine factories on register	1
(b) Wholesale dealers in margarine on register	99
(c) Butter factories on register	2
Visits to registered premises	102

Restaurant, Hotel, and Canteen Kitchens.

The inspection of catering establishments is recognised as an important branch of the work of the Sanitary Section in view of the great increase in the number of persons who take meals in restaurants, canteens, snack bars, etc., and the association of contaminated food with the incidence of food poisoning outbreaks. So far as the inspectorial staff position has permitted, supervision of these types of premises has been maintained, particular attention being directed to the kitchens of centrally situated restaurants and cafes.

Structural defects have been remedied in many cases and obsolete and worn-out equipment has been renewed after representation had been made to proprietors who have, however, experienced difficulty in replacing chipped and cracked crockery owing to the difficult position as to supplies.

In many catering establishments, stainless steel equipment has been provided. Experience has shown that sinks made of this metal are not inferior to wood in minimising crockery breakages, are more readily cleansed, and do not deteriorate. In cases in which applications have been made to the Ministry of Food for catering licences, applicants referred by the Ministry are advised as to hygienic requirements to ensure that newly established premises are suitably designed and equipped. Plans of extensions and alterations to kitchens, etc., submitted to the City Architect are also examined and similar requirements are indicated to the architects concerned.

It is recognised that contamination of food may occur, however, in premises which satisfy structural and other requirements and the Inspectors constantly stress the importance of personal cleanliness in the handling of food, realising that unless hygienic principles are appreciated and observed by kitchen staffs at every stage connected with food storage, preparation and service, the advantages of modernised premises and equipment will largely be nullified. In this connection, it may be anticipated that the operation of the impending Catering Wages Regulations will lead to an easement of staffing problems, with a corresponding tendency to an improvement in the status of kitchen staff and eventually to higher standards of hygienic practice.

A marked reduction in infestation of kitchens by steam flies and other insects has been observed with the increasing use of modern insecticides. Infestation by rodents has been dealt with effectively by the Rat Executive Officer in several instances.

Unsatisfactory conditions have mainly been of a minor character and have been remedied by representation to the persons involved, but in two cases in which serious contraventions of Section 13 of the Food and Drugs Act occurred, legal proceedings were instituted and fines amounting to £132 were imposed by the Justices.

Food Preparation Premises.

Premises in which the preparation of sausages, potted, pressed, or preserved food is carried on are registrable under Section 14, Food and Drugs Act, 1938, 460 such premises being on the register at the end of the year. The comments made as to the supervision of restaurant, etc., kitchens are also applicable generally to the above-mentioned types of premises.

Bakehouses and other premises to which Section 13 of the Act is applicable also receive attention and in one case in which very unsatisfactory conditions of food preparation were discovered, legal proceedings were instituted and fines amounting to £10 were imposed.

Sale of Food from Vehicles, Receptacles, etc.

Action was taken during the year to carry into effect the provisions of Section 41 of the Manchester Corporation Act, 1946, as to registration of persons selling food from carts, barrows, and other vehicles, etc., and of the premises in which food intended for sale from such vehicles, etc., is stored. The operation of registration was facilitated by prior measures taken to secure observance of the provisions of Section 66, Manchester Corporation Act, 1934, which requires food vendors to inscribe, exhibit, or display their name and address on their vehicles.

The majority of the food vendors who have been registered operate in the central area of the City as street traders or from open sites and fruit is the principal commodity sold. Other types of traders registered include green-grocers, fishmongers, and mobile canteen proprietors.

The investigation of applications for registration of persons and their premises showed unsatisfactory conditions of food storage in many instances, including storage in the yards, cellars, and living rooms of dwelling-houses. In many cases, unsatisfactory premises were readily capable of being rendered suitable for food storage and after necessary alterations, repairs, and cleansing had been effected, the premises were approved and registered.

In a number of cases in which unsatisfactory conditions could not be, or were not, remedied, registration was refused by the Corporation after the applicants concerned had exercised their right to appear before the Committee to show cause why the Corporation should not for specified reasons refuse to grant registration. No appeals were made to a court against the decision of the Corporation in these cases. Many of the street traders in the central area of the City who experienced difficulty in making their storage premises suitable or who could not obtain suitable alternative premises individually have occupied collectively suitably equipped premises and this arrangement has facilitated registration and subsequent inspection to ensure that hygienic conditions of food storage are observed.

The Medical Officer of Health has prepared a circular, reproduced below, which is issued to every person when registered under the Act.

MANCHESTER CORPORATION ACT, 1946.

Section 41—Registration of Hawkers, etc.

PREVENTION OF THE SPREAD OF DISEASE BY FOOD.

The Medical Officer of Health desires to impress upon food vendors the importance of cleanliness in handling, storing, and distributing food to the public. Food is easily contaminated and may be responsible for the spread of disease. It is essential that all persons engaged in handling food for sale to the public should adopt precautions to minimise the possibility of the spread of infection.

PREVENTION OF THE SPREAD OF DISEASE BY FOOD—*continued*.

Strict care must be given to personal hygiene and it is the responsibility of every person handling food for sale to see that they are clean personally and that their habits and methods of handling food are of a high standard. In all food handling CLEAN HANDS is the first and most important factor.

Food may also be contaminated by contact with dirty vehicles, scales, or containers, or by storage in dirty or unsanitary premises. All animals should be excluded from premises in which food is stored and measures taken to repress rats, mice, or other vermin should they be present.

Particular attention must be given to the following precautions :—

- (1) Persons suffering from infectious disease, diarrhoea, sore throat, or skin disease, or who have any open sore on the hands or face, are not permitted to handle food intended for sale to the public.

Any person suffering from coughs or colds should not sell food until recovered.

- (2) Food vendors must wash their hands thoroughly and scrub their nails before commencing to handle food each day, and as often as may be necessary during the day, especially after using a sanitary convenience.
- (3) Where food is sold in paper bags it is not permissible to lick the fingers or blow into bags to facilitate the opening of the bags.
- (4) All vehicles, receptacles, and equipment must be maintained in a cleanly condition at all times, and food should be kept covered as much as possible to protect it from dust, dirt, and flies.
- (5) Food storage premises should be cool and must be maintained in good repair and in a thoroughly cleanly condition. Adequate precautions must be taken against the access to food by insects, vermin, or any animal.
- (6) Refuse must be stored in suitable covered receptacles and so kept as to prevent the access thereto by children or others. Refuse must be removed for destruction at least once a day.

Failure to observe the above precautions may result in the revocation of registration ; the Corporation is empowered to revoke any registration where the public health is, or is likely to be, endangered by any act or default in relation to the quality or storage or distribution of food.

C. METCALFE BROWN,
Medical Officer of Health.

Dwelling-house Inspection.

The progressive increase in the number of complaints received about structural and sanitary defects in dwelling-houses has necessitated concentration by the district inspectors upon this important branch of the work of the section to a far greater extent than in pre-war years.

The number of inspections was 19,779 and re-inspections totalled 30,123, and the main types of disrepair encountered were leakages in roofs and eaves-gutters, bulged ceilings, dampness due to porous brickwork, and defective watercloset and drainage systems.

It is evident that the inevitable deterioration of house property which occurred during war years by reason of the suspension of adequate maintenance work, has continued in the post-war period and it is probable that the large number of complaints received, by no means represents the number of cases in which serious housing disrepair and dilapidation exists and is accepted tolerantly by tenants.

Several factors contribute to the existing position; it is noted that owners infrequently execute work of a preventive character such as painting iron and woodwork and pointing brickwork; this may be due to the greatly increased costs involved and the resultant decay and disrepair is not remedied in an increased number of cases until statutory compulsion is applied. This is particularly applicable to houses subject to control under the Rent Restrictions Acts and to property situated in potential clearance areas where the continued operation of the Postponement of Works Order, 1939, entails the occupation of dwellings which have long been unfit for habitation.

The shortage of such materials as slates, timber, gutters, and rainwater pipes, lead, plaster, and the scarcity of outside watercloset basins to replace the large number fractured by frost early in the year has caused delay in many cases in securing repairs and renewals. The introduction in September, 1947, of priority certificates for certain essential materials improved the situation somewhat, and the position became easier towards the end of the year, although many cases occurred in which contractors were unable to obtain materials on production of a priority certificate to their merchants. As a result of the shortage of materials and, in some instances, labour difficulties, repairs were executed in a piecemeal manner, necessitating many additional visits by the inspectors whose duties have become much more exacting in consequence of the general situation as to repairs.

During the last year or so, a new factor has developed to militate against the repair of houses, namely, the abandonment by owners of old and insanitary dwellings and the conveyance of such property to "men of straw" who have been found, on occasion, to be resident in a public institution or in a common lodging-house. It appears probable that the original owners took such action to escape a responsibility for repairs leaving the tenants concerned to pay arrears of rates and taxes to the authorities concerned. Extensive enquiries are often necessary in these cases before statutory action to secure repairs can be effected.

An increasing number of cases have occurred in which worn-out or dangerous houses, situate in a terrace, have been demolished leaving, in many cases, party walls only 4½ ins. thick and in bad condition; in some instances these walls terminate below the roof ridge leaving the remaining occupied houses seriously exposed to wind and driving rain. Statutory action to remedy these conditions is frequently prolonged owing to the legal and other considerations involved, particularly when the property concerned had been acquired for the sole purpose of demolition to obtain building material for sale to contractors, etc.

Statutory notices respecting all types of structural disrepair and sanitary defects were served upon the owners of 5,911 houses and legal proceedings were instituted in 40 cases for non-compliance.

In addition to this action, the Drainage and Works Branch executed work in default at 316 premises and upon owners' request at 161 premises, the work involved being concerned mainly with defective drainage and sanitary appliances, including the renewal of rainwater pipes, eavesgutters, and waterclosets.

The Drainage Branch also remedied defects in public sewers situate on private property at 835 premises under the provisions of Sections 23/24, Public Health Act, 1936, as amended by Section 33 of the Manchester Corporation Act, 1946. The cost of this work is recoverable from the owners of the premises served by the sewers mentioned.

Rent Restrictions Acts, 1920-39.

Formal applications were made by 63 tenants of dwelling-houses for certificates of disrepair under the above Acts and 46 such certificates were granted after inspections had disclosed that the houses concerned were not in a reasonable state of repair. In 7 cases certificates were not issued as the requisite repairs were effected within a short period after the receipt of the applications, and 1 case was pending at the end of the year.

Of the 63 applications received, 10 related to houses which were found to be subject to new control under the 1939 Act, and upon being advised by the Town Clerk that the issue of a certificate of disrepair would not entitle them to withhold a percentage of the rental, 9 of the 10 applicants withdrew their applications and the defects found on inspection were dealt with subsequently by the service upon the owners of statutory notices under the Public Health Act; 1 applicant preferred to pursue his application and a certificate of disrepair was issued to him.

In 10 cases, owners of houses applied under Section 5 of the 1923 Act for reports to the effect that the houses concerned had been placed in a reasonable state of repair. In 9 of these cases such reports were issued to the owners, but in 1 case the report was not issued as the necessary repairs had not been completed.

Common Lodging-houses.

Common lodging-houses are supervised by the district sanitary inspectors in accordance with byelaw provisions and the requirements of the Public Health Act, 1936, as to registration, sanitary accommodation, water supply, overcrowding, washing facilities, cleanliness, and the prevention of the spread of infectious diseases.

The provisions as to the means of escape in case of fire are dealt with by the City Architect.

A common lodging-house is defined in Section 235 of the Act as a house, other than a public assistance institution, provided for the purpose of accommodating by night poor persons, not being members of the same family, who resort thereto and are allowed to occupy one common room for the purpose of eating or sleeping, and includes, where part only of a house is so used, the part so used.

The Act provides that no person shall keep a common lodging-house or receive a lodger therein unless he is registered as the keeper by the local authority.

Registration is granted in cases in which the Corporation is satisfied as to the fitness of the keeper or his deputy and that the premises are suitable for use, sanitation and water supply are satisfactory, and that in other respects, including means of escape in case of fire, the premises are suitably equipped for use as a common lodging-house. The location of the establishments, in relation to adjacent inhabited premises, is also taken into consideration.

The number of common lodging-houses in the City was reduced by the discontinuance of two registered establishments during the year and the existing accommodation is as follows:—

	Registered premises	Accommodation
Males	14	2,118
Females	1	210

The number of inspections totalled 460 and it was found that a reasonable standard of amenities, cleanliness of premises and equipment had been achieved despite the continued shortages of equipment, cleansing materials, and difficulty in securing suitable labour for routine cleansing of premises.

It is recognised that many persons who frequent common lodging-houses are of an itinerant type and are likely to introduce body lice or other vermin into the premises. Lodging-house keepers are urged accordingly to exercise vigilance in the detection of vermin infestation in bedding or furnishings and arrangements exist whereby infested persons are cleansed and their clothing disinfested at the Corporation clinic at Monsall Hospital. During the year, 131 residents at common lodging-houses were cleansed voluntarily under this procedure. Several of the houses have installed steam disinfesting plant for the treatment of infested bedding, etc., and in these cases, infested articles are dealt with on the premises. In other cases, infested bedding is removed by the Corporation for disinfestation at the Monsall station.

In addition to routine cleansing, dormitories are sprayed systematically with D.D.T. insecticide and bedding is dusted with D.D.T. powder with satisfactory results.

An important feature in the supervision of common lodging-houses is that concerned with the prevention of the spread of infectious diseases, and in view of the occurrence of smallpox in other parts of the country in the first half of the year, 108 special visits were made to common lodging-houses in the City to ascertain whether any suspicious illness had occurred among the lodgers. Keepers were advised as to the action to be taken in the event of suspicious symptoms developing and precautionary notices offering free vaccination facilities were exhibited at all the common lodging-houses in the City during the period of the outbreak.

Houses Let in Lodgings.

The byelaws relating to houses which are let in lodgings include provisions as to registration, closet accommodation, water supply, washing accommodation; storage, preparation and cooking of food, repair and lighting of common staircases, prevention of and safety from fire, and cleansing and redecoration of the premises at stated intervals.

There are 927 houses registered under the byelaws, including 349 "farmed" houses, but it is probable that many houses to which the byelaws are applicable are let in lodgings without notification being made to the Corporation as required by the byelaws. Appropriate action will be taken in this regard when the staff position makes it possible to carry out a survey for the purpose.

Inspections of registered houses totalled 1,486 and contraventions of the byelaws were reported in 162 cases, and of these remedial measures were secured in 100 cases by informal action.

Notices under the byelaws were served in 54 cases relating to cleansing and redecoration of premises and other notices concerned accommodation for cooking and the provision of adequate lighting. All the notices were complied with although action was protracted in many cases by reason of the difficult position as to materials and labour.

Legal proceedings were instituted in 2 cases for contraventions of the byelaws. In 1 case in which the tenant had failed to cleanse the premises a fine of £2 was imposed by the Justices. In another case concerning the absence of adequate cooking accommodation and artificial lighting, the work was completed before the hearing and the case was withdrawn on payment of costs.

Caravan Dwellings.

There are 16 sites on which approximately 120 caravan dwellings are located in the City, excluding sites used occasionally by travelling showmen in connection with fairgrounds. 54 inspections were made under the provisions of the Public Health Act relating to the prevention of nuisances, filthy and verminous premises, and the prevention of the spread of infectious diseases. Few complaints were received and in no case was it found necessary to take formal action to rectify unsatisfactory conditions.

Canal Boats.

Canal boats used for the conveyance of goods and which are used as dwellings are inspected in accordance with the provisions of the Public Health Act, 1936, and the regulations made in 1878 under the Canal Boats Act. These regulations were designed to secure that hygienic living accommodation was provided and maintained for the persons whose livelihood compelled them to dwell within the necessarily congested space available on the boats.

Having regard to the improved standards of housing, education, and amenities which have taken place in the lives of people of the working class since the first world war, it is surprising to find that mothers continue to rear families on canal boats under conditions of "home life" formulated by regulations made 70 years ago. It may be stated that the Manchester canal carrying undertakings prohibit the use of their boats by women and children. The number of "narrow" boats, in which type women and children are usually found, was reduced considerably in the early months of the year, but increased later, with indications of a greater use being made of this type of boat in the Manchester canals in the immediate future.

608 inspections were made and unsatisfactory conditions were found in 30 instances, 21 of which related to dirty conditions or disrepair; the remainder to minor infringements of the regulations.

19 notices were served and informal action was taken in 11 cases, resulting in remedial action being taken in most of them. The outstanding matters were the subject of appropriate action to secure full compliance with the regulations.

No infectious disease was reported to have occurred in canal boats within the City.

The arrangements whereby welfare services in the City are made available to women and children living on canal boats continue in operation.

Water Supply.

The water supply to the City is derived from impounding reservoirs at Thirlmere and Haweswater in the Lake District and from the Longdendale Valley, situate in the Pennine Range about 18 miles distant to the east of the City.

Water from these sources is supplied to all dwelling-houses in the City with the exception of 2 isolated cottages in North Manchester, supplied with satisfactory water from a spring, and 9 houses in the undeveloped portion of the Wythenshawe area.

The latter houses are supplied from 7 wells, 5 of which are unsatisfactory, the water being boiled before use. The property concerned is too remote from the towns mains to make the provision of a piped supply practicable.

Water supplies to domestic and other premises are sampled systematically as a routine measure and upon receipt of complaints, which usually relate to local temporary discolouration. 35 samples of towns water were taken for bacteriological and chemical examination and all were found to be satisfactory, as was a sample taken from the spring supplying the two cottages in north Manchester and 2 samples from a well supplying water to an industrial concern.

Information regarding analyses is exchanged with the Waterworks Department.

47 reports of insufficient water supply or inadequate pressure were referred to the Waterworks Department,

The following information has been supplied by the Engineer and Manager of the Waterworks Department of the Corporation:—

“ The water supply has been satisfactory both in quality and quantity.

Regular samples are taken for bacteriological examination of the raw water and of the treated water going into supply. Out of the 376 samples of water going into supply examined in 1947, 340 were found to be free from coliform bacteria. Typical chemical analyses of the sources of supply are given herewith.

TYPICAL ANALYSES—*January to December, 1947.*

THIRLMERE AND HAWESWATER LAKES.

These waters were not examined during 1947.

LONGDENDALE AQUEDUCT. RAW WATER.

This water is subject to wide fluctuations in character and the following table gives an indication of these fluctuations.

pH value	.. .. .	4.5	to	6.0
Colour, p.p.m. platinum	.. .. .	24	to	95
Turbidity, p.p.m. silica scale	.. .. .	10	to	50
<i>Parts per million</i>				
Total solids, dried at 180°C.	.. .. .	60	to	70
Free acidity as CO ₂	.. .. .	4.0	to	11.0
Alkalinity as CaCO ₃	.. .. .	2.0	to	6.0
Total hardness as CaCO ₃	.. .. .	around 35		
Chlorides as Cl ₂	.. .. .	10.0	to	12.0
Nitrates as N ₂	.. .. .	0.12	to	0.48
Free and saline ammonia, NH ₃	.. .. .	0.050	to	0.200
Albuminoid ammonia, NH ₃	.. .. .	0.060	to	0.116
Oxygen absorbed test, 4 hours at 27°C.	.. .. .	1.26	to	3.00
Silica as SiO ₂	.. .. .	7.0	to	10.0
Iron as Fe	.. .. .	0.30	to	1.72
Managanese as Mn	.. .. .	trace	to	0.38

PLUMBOSOLVENCY.

LONGDENDALE SUPPLY.

This is a soft moorland water supply and it has a marked plumbo-solvent action. It is capable of dissolving up to 3.1 p.p.m. of lead (Pb) after overnight contact with lead service pipes.

The water is neutralised with hydrated lime, at an average dose of 7 to 8 p.p.m., prior to distribution. During the severe winter conditions, which prevailed in the early part of the year, deliveries of lime were impossible and the absence of lime treatment is apparent in the results given below.

The following results were obtained on actual distribution, the water having been in contact with lead service pipes overnight, that is, 8 to 9 hours contact :—

<i>Date</i>		<i>pH value</i>	<i>Lead content as Pb.</i>
			<i>Parts per million</i>
January	27	6.6	0.2
February	3	6.3	0.4
„	10	5.6	0.9
„	17	5.8	1.8
„	24	6.0	2.2
March	2	6.1	2.4
„	7	6.0	2.7
„	10	6.2	2.9
„	20	6.0	3.1
„	31	5.8	3.0
April	25	6.05	2.1
„	28	6.10	2.3
May	6	6.55	0.9
„	12	6.90	0.6
„	20	7.52	0.4
„	28	7.97	0.4
June	9	9.25	0.2
September	29	9.00	0.2
October	6	8.63	0.2

THIRLMERE SUPPLY.

Plumbosolvency tests were not carried out on this supply. The water is neutralised with hydrated lime. The untreated water has a low plumbo-solvent action.

BACTERIOLOGICAL REPORT.

Lakes, Aqueducts, and Service Reservoirs.

	Total number of samples	Samples free from Coliform bacteria	Faecal Coli present		Non-faecal Coli present	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.
Haweswater Lake ..	0	0	0	0	0	0
Haweswater Aqueduct	0	0	0	0	0	0
Thirlmere Lake	0	0	0	0	0	0
Thirlmere Aqueduct ..	43	33	5	1-2	9	1-8
Longdendale Aqueduct	48	2	44	1-250	41	1-160
<i>Service Reservoirs—</i>						
Audenshaw No. 1 ..	12	1	11	1-250	11	2-350
„ No. 2 ..	12	2	9	3-600	9	1-350
„ No. 3 ..	12	1	10	1-250	10	1-110
Denton No. 1	12	7	3	1-3	4	1-4
„ No. 2	12	6	4	1-2	4	1-15
Godley Inlet	48	42	2	2-5	5	1-12
(Chlorinated)						
Godley Outlet	48	40	6	1-2	5	1-30
Heaton Park	30	15	15	3-600	13	2-600
Prestwich No. 1 ..	50	43	2	1	7	1-35

Waters from Haweswater and Thirlmere lakes are chlorinated shortly after the water enters the aqueducts. The water is rechlorinated before it enters the Manchester area of supply. The Thirlmere aqueduct samples represent the water prior to this second chlorination.

Longdendale aqueduct water is chlorinated before it enters Godley Reservoir and sufficient chlorine is added (as chloramine) to maintain a residual in the water leaving the reservoir.

Chlorinated Water Supplies.

	Total number of samples	Samples free from Coliform bacteria	Faecal Coli present		Non faecal Coli present	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.
Andenshaw	62	57	0	0	5	1-2
Denton	50	44	2	1	5	1-5
Godley	56	54	1	1	1	1
Heaton Park	55	47	4	1-25*	8	1-8
Prestwich	51	42	2	1	7	1-2
Thirlmere Aqueduct ..	102	96	0	0	6	1-2
Total	376	340	9	4-25*	32	—

* When this result, 25 coli per 100 mls., was obtained, two repeat samples were immediately taken and each of these showed 2 coli per 100 mls. and of which only one sample showed 1 faecal coli per 100 mls. Apart from this one bad sample, the three remaining samples showed 1 to 2 faecal coli per 100 mls.

Additional Results.

	Total number of samples	Samples free from Coliform bacteria	Faecal Coli present		Non-faecal Coli present	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.
<i>Service Reservoirs.</i>						
Bowdon	3	0	2	2	3	2-5
Gorton Upper	12	3	7	1-1800	8	1-900
„ Lower	12	4	6	1-13	8	1-17
<i>Chlorinated Supplies—</i>						
Bowdon	50	41	0	0	9	1-35
Gorton Lower	60	47	1	1	13	1-25
Total	110	88	1	—	22	—

SUMMARY.

Chlorinated Supplies.

Supplies	Number of samples	Samples free from Coliform bacteria		Samples free from Faecal Coliform bacteria	
		No.	Percentage	No.	Percentage
Audenshaw, Denton, Godley, Heaton Park, Prestwich, and Thirlmere Aqueduct	376	340	90·4	367	97·6
Bowdon and Gorton Lower	110	88	80·0	109	99·1
Total	486	428	88·1	476	97·9

The Thirlmere and Longdendale supplies are treated with hydrated lime. This has proved effective in limiting the maximum lead content found in samples given overnight contact with lead service pipes to about 0·2 parts per million.

It has proved impracticable to prevent access of seagulls to the larger service reservoirs. Pollution from this source is dealt with by chlorination at the outlets of the reservoirs.”

Infectious Diseases.

The investigation of certain notifiable infectious diseases is carried out by the district sanitary inspectors and in 1,588 such cases enquiries were made with a view to ascertaining the source and preventing the spread of infection and to secure the effective isolation of patients who are not removed to hospital. Insanitary conditions found on inspection also received appropriate attention.

In addition to the above-mentioned investigations, 802 visits were made to the homes of persons suffering from tuberculosis.

The tracing of contacts is an important feature of the visit connected with the spread of infectious disease and 420 visits were made for this purpose, including 107 enquiries concerning contacts with smallpox cases which occurred outside the City.

Smoke Abatement.

The activities of the smoke inspectors, although reduced somewhat by staff depletion, continued to be directed to the prevention and abatement of smoke nuisances and to advisory visits with a view to the reduction of smoke emission generally.

Industrialists in the main now realise that excessive smoke emission is indicative of fuel wastage, but the inspectors still find scope to demonstrate that smoke abatement and efficiency of fuel combustion are synonymous terms. Their efforts in this direction have been stimulated by the publication in 1947 by the Fuel Research Station of Technical Papers on the subject; Technical Paper No. 53 describes the results of an investigation on the smoke and chimney gases produced in a hand-fired Lancashire boiler and Technical Paper No. 54 deals with trials carried out to determine the effect of smoke elimination on fuel consumption. The latter paper makes reference to a newly designed type of firing door for hand-fired furnaces. This door was originally devised for the purpose of reducing smoke emission from merchant shipping during the last war so as to minimise the risk of attack by enemy submarines. It is hoped that industrialists will realise the increase in fuel efficiency and corresponding reduction in smoke emission which would result from the incorporation of the appliance in existing furnace installations.

The Smoke Inspectors found that the main reasons for excessive smoke emission during 1947 were inefficient or careless firing and the use of unsuitable or inferior fuel.

Whilst there are indications of a lack of interest and sense of responsibility among sections of furnace operatives, many firemen have availed themselves of the advice and guidance of the Smoke Inspectors and improved methods of firing and cleaning out have resulted, with a corresponding increase in fuel economy and plant efficiency.

Reference is made elsewhere in the report of the Medical Officer of Health to the successful classes in boiler-house practice held at the Manchester College of Technology, and there is direct evidence of the value of these classes in the added interest and enthusiasm displayed in the boiler-houses by the men who have availed themselves of the opportunity of acquiring basic and practical knowledge of the principles of combustion and other aspects of their work.

The use of unsuitable fuel was accentuated by the national fuel crisis in the early months of the year and is illustrated by the use at one period, of waste rubber as fuel at a textile mill as an alternative to slowing down or terminating production vital to the export drive. The fuel situation improved later in the year as to supplies and suitability and it is understood that the National Coal Board is devoting urgent attention to the improvement of the quality of coal which should result in increased plant efficiency and a reduction in atmospheric pollution.

In cases in which smoke nuisance was attributable to the use of inferior or unsuitable fuel, representations were made to the Ministry of Fuel and Power with a view to an improvement being effected wherever possible.

In several cases in which smoke nuisance was due to negligent firing legal proceedings were instituted and penalties were imposed by the magistrates in 5 instances,

Particulars of action taken in accordance with the provisions of the Public Health Act as to smoke nuisances are summarised below:—

Timed observations taken	406
Black smoke, 2 minutes and over in half-hour periods ..	55
Smoke other than black and causing nuisance.. ..	2
Black smoke under 2 minutes	153
Not revealing black smoke	195
Exempted chimney revealing black smoke, 2 minutes and over	1
Total amount of black smoke observed in minutes ..	499·5
Average amount of black smoke observed (in minutes) per observation revealing black smoke	2·36
Complaints received from all sources	21
Visits to works <i>re</i> smoke abatement	506
Premises where inspectors recommended plant to be altered, improved, or repaired	7
Premises where plant was found to have been repaired as a result of Inspector's recommendation	4
Cases reported to Committee	57
Cases cautioned or excused	33
Statutory notices served	16
Magistrates' order to abate nuisances obtained	2
Application for Magistrates' order refused	1
Prosecutions for smoke nuisances and penalties imposed..	5
Total amounts of penalties and costs	£8 12s. 0d.
Statutory notices expiring without further action	11
Approximate number of industrial chimneys in the City ..	1,373

Causes to which smoke emissions are attributed.

Of the 57 cases reported to the Committee where chimneys emitted smoke for two minutes or over in the half-hour period, the nuisance was found to be due to the undermentioned causes:—

Bad firing	22
Unsuitable fuel	21
Bad firing and unsuitable fuel	4
Fireman having other duties to perform	2
Insufficient boiler plant	3
Structural defects in plant	3
Alterations to plant in progress	1
Abnormal demand on plant	1

Manchester Corporation Act, 1946. Smoke Abatement Clauses.

Prevention of Smoke from Industrial Furnaces.

Section 36 of the Act, which became operative on the passing of the Act, is reproduced below and it will be noted that the provisions are designed to ensure that newly installed furnaces to which the Act applies shall incorporate all practicable means of smoke prevention.

- (1) No person shall install in any building whether erected before or after the passing of this Act any furnace for steam raising or for any manufacturing or trade purpose unless such furnace is so far as practicable capable of being operated continuously without emitting smoke.
- (2) Any person who contravenes the provisions of this Section shall be liable to a penalty not exceeding ten pounds and to a daily penalty not exceeding two pounds.
- (3) If a person before installing in a building a furnace to which this section applies submits to the Corporation plans proposals and particulars of the proposed furnace and furnishes them with such other necessary information in regard thereto as they may require the Corporation shall within a period of six weeks from the date upon which such plans proposals particulars and information are received by them serve a notice upon such person stating whether or not they are satisfied that the furnace is so far as practicable capable of being operated continuously without emitting smoke and if they are so satisfied or if they do not serve a notice upon such person before the expiration of the said period of six weeks no proceedings shall be taken against him under this section in respect of the installation of that furnace in accordance with the plans proposals particulars and information so submitted and furnished.
- (4) In determining for the purposes of this section whether a furnace is so far as practicable capable of being operated continuously without emitting smoke the Corporation or a Court shall if either of the parties so desire have regard to cost and to local conditions and circumstances.

Although the submission of plans and proposals regarding new furnace installations is not compulsory under the Act and prior approval of installations is not obligatory, a number of plans and proposals were received and notices of approval were issued within the prescribed period to the industrialists concerned.

The number of formal applications for approval was relatively small and may be attributable in part to the difficult supply position as to boilers and appliances. It had been anticipated that many large scale reconstruction schemes involving the installation of industrial furnaces would have matured but it is apparent that many schemes had perforce to be deferred in view of the national economic position.

As prior notification of the installation of furnaces is not required under the Act, it is possible that some industrialists may have installed furnaces without the knowledge of the department, especially when the furnace concerned was a replacement in an existing building.

When plans of new or reconstructed buildings are submitted to the City Architect, and chimneys, flues, or arrangements for housing fuel burning appliances are indicated on the plans, they are referred to the Medical Officer of Health for consideration as to the application of Section 36 of the Act to any furnace which may be installed in the new or reconstructed building. The attention of the architect concerned is drawn to the provisions of Section 36 and, in several cases, advice has been given with a view to the prevention of infringements of the Act.

Reference was made in last year's report to the setting up of a panel of Corporation officers with specialised knowledge of fuel technology, engineering, and smoke abatement to consider technical and economic problems connected with the submission of plans and proposals concerning new furnace installations.

Several meetings of the panel have been held and a code of requirements for steam raising furnaces was formulated to facilitate the consideration of plans and proposals and to assist industrialists who seek advice on constructional features of proposed installations to ensure conformity with the purpose of Section 36 of the Act. The code of requirements is reproduced below but it is realised that modification may be required in the light of experience, exceptional circumstances and new developments in engineering and combustion technique.

MANCHESTER CORPORATION ACT, 1946—SECTION 36.

STEAM RAISING FURNACES—CODE OF REQUIREMENTS.

1. NATURE OF BUSINESS, ETC.

2. MAKE AND TYPE OF BOILER.

- | | |
|--|---|
| (a) <i>Evaporative Capacity</i> . . | The boiler shall be of sufficient size to meet an evaporation of 20 per cent. in excess of the maximum demand for steam. |
| (b) <i>Grate Areas</i> . | Shall be sufficient to give the necessary evaporative power to meet the demand without forcing. |
| (c) <i>Area of heating surfaces</i> . | The ratio of boiler heating surface to grate area shall be sufficiently high to give the required evaporative power to meet the maximum steam load. |
| (d) <i>Working Pressure</i> . | To be stated in all cases. |
| (e) <i>Distance between Grate and nearest water-cooled surface</i> . | With externally fired boilers shall be sufficient to produce efficient combustion of the volatiles in the fuel. |

3. FUEL AND METHODS OF FIRING.

- | | |
|----------------------------|--|
| <i>Bituminous coal</i> . | All boilers shall be mechanically fired, subject to modification to meet emergency conditions. |
| <i>Smokeless (solid)</i> . | |
| <i>Anthracite</i> . | |
| <i>Creosote Pitch</i> . | The C/P burning installations to comply with Ministry of Fuel and Power, Fuel Efficiency Bulletin No. 36. |
| <i>Oil</i> . | Oil burning installations to comply with the Codes of Oil Burning Equipment specified by the British Standards Institute and/or the Ministry of Fuel and Power Efficiency Bulletin No. 24. |

4. DRAUGHT.

Shall be adequate to meet maximum rates of combustion for varying types of fuel and in accordance with the recommended specifications in the Ministry of Fuel and Power publication "The Efficient use of Fuel."

Draught gauges to be fitted to all furnaces.

Provision of secondary air to furnace.—Where necessary, shall be adequate and controllable to meet the varying rates of combustion.

Provision of air to boiler-house.—Provision shall be made for continuous and adequate air admission to the boiler-house to support complete combustion, and wherever practicable, the air supply shall be direct from the external air,

5. FEED WATER.

Automatic feed is desirable to obviate the necessity of forcing the boiler due to the introduction of a large volume of relatively cold feed water.

A feed water meter of recording type to be installed with all boiler plant. (Not applicable when smokeless fuel is used.)

6. FLUES, CHIMNEYS. SIZE, ETC., AND POSITION.

The required dimensions and construction shall conform with recognised formulae and general combustion engineering practice.

The flues shall be as far as possible straight and direct to chimney base. Any changes in alignment shall be curved and no sharp angles shall be permitted. Adequate provision shall be made for inspection, testing, and cleaning purposes. No other connection shall be made to any chimney or flue which will reduce the draught below that for efficient combustion.

In the case of brick set shell type boilers, provision is to be made to prevent short-circuiting of flue gases due to the expansion and contraction of the boiler shell.

Nature of Damper Control.—All dampers shall be of the “sealed type” to exclude all air leakage and shall be capable of operation from the firing floor.

Smoke Indicators.—Unless the top of the chimney is easily visible from the boiler house, mirrors, smoke indicators, or similar devices to be provided.

7. GRIT EMISSION.

Provision to be made to prevent the emission of soot, ash, or grit from installations in which the intensity of draught and the type of fuel used render such provision necessary.

.

It will be observed that reference is made in the code for steam raising furnaces to the use of bituminous coal as fuel. It was recognised that this type of fuel will, of necessity, be used for economic reasons, in many types of steam-raising furnaces. Reference may be made in this connection to the Simon Report which recommends the use of bituminous fuel in suitable furnaces so as to allow the limited supply of smokeless fuels to be used in domestic installations.

In requiring the provision of mechanical stokers where bituminous coal is used, it was felt that these appliances are essential to the prevention of smoke emission which inevitably occurs with hand firing at irregular intervals. Mechanical firing considerably lessens the necessity to open the firedoors and the predetermined feeding of small quantities of fuel maintains a high uniform furnace temperature, and when properly installed and controlled it assures efficient conditions of combustion.

Industrialists have displayed a marked degree of co-operation in meeting the requirements of the Corporation at a period of exceptional difficulty and with a return to normal conditions of adequacy in supplies of appliances and suitable types of fuel, it is anticipated that the provisions of Section 36 will be more widely appreciated as a contribution to industrial efficiency.

Section 35, Smokeless Areas.

The provisions of the Act as to the creation of smokeless areas in the City have not been implemented in view of the continued difficult position as to supplies of smokeless fuel and other considerations mentioned in the report last year and reproduced herewith:—

In considering the date of operation of the powers to create the first smokeless area in the City, it was necessary to have regard to the existing serious shortage of fuel, including smokeless types, and to the difficulty of converting unsuitable grates and appliances to gas, electricity, or other smokeless operation and to the additional load which would be imposed upon the supply undertakings at a critical period.

It was considered further that premature action to implement the new powers of the Corporation may well have aroused prejudice against the measure, the ultimate success of which depends to an appreciable extent upon the co-operation and goodwill of occupiers of premises in the area concerned. The Health Committee accordingly deferred a decision as to the date of operation of this section of the Act until the position regarding the production and availability of smokeless fuels and appliances is more favourable.

The considerations which impelled the Committee to defer a decision as to the date of operation of the Section still exist and in some respects the supply position has become more acute. When the production and availability of smokeless fuels and appliances becomes more favourable, the position will be reviewed and appropriate action will be taken to carry the provisions into effect.

Atmospheric Pollution.

The measurement of deposited atmospheric pollution was continued throughout the year by means of the 7 deposit gauges and 3 sulphur estimation instruments located in selected districts within the City.

The monthly mean of the total solids deposited at all gauges shows an increase over the corresponding period (April to March) in 1946-47, the amounts recorded being equivalent to 18·73 tons per square mile in 1947-48 compared with 17·85 tons per square mile in 1946-47.

It may be noted in the table below that whilst increases occurred in the total solids deposited at the Monsall and Philips Park gauges, which are situated in districts which are mainly industrial in character, the deposits at the 5 other gauges were slightly less in amount than in the previous year.

Fluctuations in deposited matter often result from variations in weather and other conditions and the Department of Scientific Research, with which body co-operation is maintained in the estimation of deposited matter, points out that a long period of observation, preferably 5 years, is necessary before reliable conclusions can be drawn.

Towards the end of the year, an additional recording station for atmospheric deposits was established for comparative purposes at Knowle House, Handforth, in a rural environment approximately 9 miles due south of the city centre.

It is thought that when records are available from this station they will provide a useful comparison with the results obtained from the gauges within the city area. The results from the recording stations in the City are shown in the following tables :—

Deposited Atmospheric Pollution (Tons per square mile).

April, 1947 — March, 1948.

	Rainfall (inches)		Insoluble Matter		Soluble Matter		Total Solids	
	1947-48	1946-47	1947-48	1946-47	1947-48	1946-47	1947-48	1946-47
BAGULEY—								
Monthly mean ..	2.2	2.8	4.41	4.24	4.92	5.77	9.33	10.01
Monthly summer ..	1.7	3.2	5.34	4.89	4.71	6.99	10.05	11.88
Monthly winter ..	2.7	2.3	3.29	3.48	5.18	4.30	8.47	7.78
BOOTH HALL—								
Monthly mean ..	2.6	3.1	7.42	7.15	6.48	7.26	13.90	14.41
Monthly summer ..	2.1	3.3	8.38	8.06	5.94	6.48	14.32	14.54
Monthly winter ..	3.1	2.9	6.26	6.06	7.13	8.21	13.39	14.27
HEATON PARK—								
Monthly mean ..	2.8	3.3	8.28	8.64	6.62	6.56	14.90	15.20
Monthly summer ..	2.3	3.5	8.14	6.65	5.97	7.24	14.11	13.89
Monthly winter ..	3.3	3.1	8.42	11.02	7.26	5.75	15.68	16.77
MONSALL—								
Monthly mean ..	2.7	3.1	12.23	9.97	9.72	7.05	21.95	17.02
Monthly summer ..	2.3	3.3	13.07	10.25	9.89	6.82	22.96	17.07
Monthly winter ..	3.1	2.9	11.21	9.63	9.53	7.32	20.74	16.95
PHILIPS PARK—								
Monthly mean ..	2.7	3.4	27.61	25.43	11.03	9.93	38.64	35.36
Monthly summer ..	2.2	3.8	29.77	21.86	9.57	9.87	39.34	31.73
Monthly winter ..	3.2	3.0	25.01	29.72	12.80	10.00	37.81	39.72
RUSHOLME—								
Monthly mean ..	2.6	3.1	10.51	9.90	8.07	8.73	18.58	18.63
Monthly summer ..	2.2	3.5	12.10	10.70	6.70	8.03	18.80	18.73
Monthly winter ..	3.1	2.8	9.24	9.36	9.16	9.19	18.40	18.55
WITHINGTON—								
Monthly mean ..	2.3	2.8	8.05	8.01	5.77	6.31	13.82	14.32
Monthly summer ..	2.0	2.9	10.02	8.52	5.84	6.31	15.86	14.83
Monthly winter ..	2.7	2.7	6.41	7.51	5.71	6.30	12.12	13.81
ALL GAUGES—								
Monthly mean ..	2.5	3.1	11.21	10.48	7.52	7.37	18.73	17.85
Monthly summer ..	2.1	3.3	12.40	10.13	6.94	7.39	19.34	17.52
Monthly winter ..	3.0	2.8	9.97	10.97	8.11	7.29	18.08	18.26

Sulphur Pollution.

Measurements by Lead Peroxide Method.

April, 1947, to March, 1948	Weight in milligrammes SO ₃ per 100 square centimetres exposed surface per day					
	Monsall		Rusholme		Withington	
	1947-48	1946-47	1947-48	1946-47	1947-48	1946-47
Monthly mean	4.29	4.33	2.77	2.93	1.94	1.88
Monthly mean (summer)	2.88	3.86	1.90	2.17	1.09	1.15
Monthly mean (winter)	5.68	4.79	3.64	3.70	2.79	2.60

Offensive Trades.

Certain registrable trades, defined as offensive in the Public Health Act, are carried on at 66 premises in the City and with one exception were conducted without giving rise to complaint. In 1 case, unsatisfactory conditions at a gut scraping establishment caused objectionable smells in the vicinity of the factory during the summer. The conditions which gave rise to the complaint were rectified by improvements in the plant and processing after a communication embodying necessary remedial work had been sent to the proprietors concerned and no further complaint was received.

Close liaison is maintained with the Town and Country Planning Section of the City Surveyor's Department regarding applications to establish new trades which may be registrable as offensive. One case which received consideration related to the appropriate form of control of a section of the waterproof garment industry in which rubber solution and naphtha are used in the seaming of waterproof garments.

Since 1st October, 1940, the trade of fish frying ceased to be a scheduled offensive trade but the siting of new establishments is controlled by the City Surveyor's Department under Town Planning requirements.

Supervision as to cleanliness and sanitary conditions is exercised by the District Sanitary Inspectors.

The following offensive trades were on the register at the end of the year :—

Blood albumen maker	1
Bone manure and size manufacturer.. .. .	1
Fat melter	1
Fish curers	2
Gut scrapers	3
Oil distillers	2
Pickle and sauce manufacturers	8
Rag and bone dealers	22
Rubber paste or solution spreaders	8
Rubber substitute manufacturers	2
Size maker	1
Soap boilers	4
Tallow melters	2
Tanners	3
Tripe boilers	6

Effluvium Nuisance.

Complaints about objectionable odours emanating from industrial premises, although small in number, involved 241 visits and observations to determine the sources of effluvia and to ensure that the best practical means were taken to prevent or mitigate this form of atmospheric pollution.

Several complaints related to atmospheric fumes in a district in which many chemical and other trade processes are carried on and the investigations disclosed that unavoidable mechanical breakdown had given rise to the intermittent discharge of chemical fumes in the vicinity of the factory concerned.

Certain trades, registrable under the Alkali, etc., Works Regulations Act, are subject to supervision by H.M. Inspector of Alkali Works with whom close co-operation is maintained in the investigation of complaints of effluvia and fumes from industrial premises.

In one instance in which a complaint related to the discharge of pungent fumes from a factory, H.M. Alkali Works Inspector was consulted and, although the offending premises were not found to be registrable, suggestions made by H.M. Inspector were adopted by the management concerned with satisfactory results. A complaint about the discharge of paint spray and fumes from a works situated near to dwelling-houses was investigated and after representations had been made to the management, the nuisance was abated by the provision of collector plates placed between a spraying chamber and an extraction fan and no further complaint was received.

Provision of Sanitary Accommodation and Closet Conveniences.

Additional sanitary accommodation at existing premises was approved in 21 instances following the submission of plans showing the situation, dimensions, ventilation arrangements, and other constructional details. The plans were submitted in many cases after representations had been made to the owners or occupiers as to insufficient or unsatisfactory sanitary accommodation at factories and other commercial buildings. The accommodation provided included ranges of waterclosets and urinals and, in some cases, lavatory wash-bowls, the necessary plumbing, drainage and constructional work being supervised by the District Sanitary Inspectors.

The number of pail closets and privy middens has been reduced by the conversion to water closets or demolition of 12 of this type of convenience during the year, but there are still 526 pail closets and 115 privy middens within the city area, including 239 pail closets and 109 privy middens situate in the undeveloped portion of the Wythenshawe Ward. The remainder of these obsolete conveniences are situated in areas in which sewer facilities are not available or are connected with houses which will be dealt with by clearance procedure under the Housing Act when such action is resumed.

Public Sanitary Conveniences.

The conveniences under the control of the Department number 144, and have accommodation as shown below :—

Males.

With urinal, watercloset, washing, and parcels accommodation	8
With urinal, watercloset, and washing accommodation	8
With urinal and watercloset accommodation	23
With urinal accommodation	72
	—
	111
	—

Females.

With watercloset, washing, and parcels accommodation ..	10
With watercloset and washing accommodation	12
With watercloset accommodation	11
	—
	33
	—

In accordance with the five-year programme adopted by the Committee to extend this service, new conveniences are about to be erected at Lightbowne Road, Moston, and Mill Lane, Northenden. The latter will replace the conveniences demolished by enemy action in 1940 near this point.

Special maintenance work carried out during the year included the reconstruction of public urinals at Upton Street, Chorlton-upon-Medlock; Mill Street, Bradford; Burton Road, Withington; and Wellock Street, Newton Heath.

A urinal behind the public library in Every Street has been demolished, being of an obsolete and unsatisfactory type and having become redundant.

The arrangements which prevailed during the war period for earlier closing of the conveniences were terminated during the year. The conveniences are now closed at 11-0 p.m. with the exception of those at Piccadilly, which remain open until midnight.

Reference was made in last year's report to the occurrence of wanton damage to public urinals and certain conveniences at which it is not practicable to employ attendants and it is pleasing to record a diminution of this malicious practice.

Factories.

1. Inspection of mechanical and non-mechanical factories, etc., under the Factories Act, 1937, is shown in the following table :—

Premises	Inspections	Written Notices	Occupiers Prosecuted
Factories (with mechanical power)	890	—	—
Factories (without mechanical power) ..	211	—	1
Total	1,101	—	1

2. Defects found are shown below :—

Particulars	Defects				Number of defects in respect of which prosecutions were ordered
	Found	Remedied	Referred to H.M. Inspector	Referred to City Architect	
Want of cleanliness (Section 1)	3	3	—	—	—
Overcrowding (Section 2)	—	—	—	—	—
Unreasonable temperature (Section 3)	—	—	—	—	—
Inadequate ventilation (Section 4) ..	—	—	—	—	—
Ineffective drainage of floors (Section 6)	—	—	—	—	—
Sanitary conveniences (Section 7)—					
Insufficient	3	*4	—	—	—
Unsuitable or defective	83	†64	—	—	1
Not separate for sexes	6	‡5	—	—	—
Unsatisfactory means of escape in case of fire	3	—	—	3	—
Totals	98	76	—	3	1

* Includes 3 from previous year.

‡ Includes 2 from previous year.

† Includes 2 from previous year.

Homework.

The inspection of premises in which certain types of homework are carried on was maintained in accordance with the provisions of the Factories and Public Health Acts relating to the wholesomeness of the premises and to ensure that the work is not carried out in premises in which notifiable disease exists.

There were at the end of the year 291 firms in the City employing a total of 1,642 outworkers; of this number 1,218 outworkers reside in the City and the remaining 424 in districts administered by other authorities who were supplied with the requisite information.

The homes of 909 outworkers were inspected and with few exceptions were found to be suitable for the purpose of the work carried on and a satisfactory standard of cleanliness obtained generally. In 10 instances defective conditions were remedied and in 4 cases necessary cleansing was effected as a result of verbal intimations to the persons concerned.

12 employers of homeworkers were found to have omitted to keep a record in the prescribed form of the persons so employed. In eight cases the employment of outworkers was connected with newly established factories and in every case the failure to keep records appeared to arise from inadvertence and the omissions were rectified without formal action being taken.

Particulars of the number of outworkers employed in the City and the classes of work in which they are engaged are shown in the following table :—

Trade	No. Employed
Wearing apparel	902
Tailoring	51
Overalls	26
Shopping bags	31
Umbrellas	65
Card manufacturers	24
Soft furnishings	53
Toys	37
Chamois leathers	7
Coat hangers	12
Lampshades	10
Total	1,218

Shops Acts—Young Persons (Employment) Act.

424 visits and inspections were made by the District Inspectors under the provisions of the above Acts. In several instances, shopkeepers had neglected to exhibit the prescribed forms as to shop assistants' half holidays or forms required to be exhibited under the Young Persons (Employment) Act, 1938. In every case the omission was rectified upon representation to the employer concerned.

Insufficient or unsatisfactory sanitary accommodation for assistants was found to exist at several premises and was remedied without recourse to statutory action.

Few complaints were received during the year and these related almost entirely to the closing hours of shops in the evening and were referred to the Chief Constable who administers the provisions, orders, and regulations as to closing of shops at night and the closing provisions of the Shops (Sunday Trading Restrictions) Act.

No infringements of the assistants' half holiday provisions or the Young Persons (Employment) Act were recorded and the absence of complaints in this respect may be significant of the existing labour position.

An application in respect of an exhibition held in the City, for exemption from closing for the weekly half-holiday and substituting 10-0 p.m. for the general closing hours fixed by the City, was granted.

Refuse Tips.

There are 36 sites at which tipping is carried on within the City ; 24 of the tips being used by private persons, 9 by Corporation Departments, and 3 are connected with local collieries. With the exception of 3 tips used by the Cleansing Department for the disposal of household refuse, the type of refuse generally is of an innocuous character and in the relatively few cases in which cause for complaint arose, it was due to the promiscuous tipping by unauthorised persons. After representations to the proprietors of the tips concerned, the offending material was disposed of satisfactorily.

Complaint was made about smoke and fumes from a tip where deep seated combustion had occurred and in this instance blanketing by sand was carried out with successful results.

The disposal of household refuse by controlled tipping, which supplements the incineration arrangements in the city, is carried out by the Cleansing Department at 3 sites in outlying districts within the City boundary.

A low-lying site, about 19 acres in extent adjoining the River Mersey, is being used as a controlled tip and after consolidation the surface will be levelled, soiled, and seeded to provide an additional site for recreative purposes. Tipping at this site is designed also to strengthen the river bank, this feature of the work being supervised by the City Surveyor and Engineer's Department.

2 other sites in the North and North-East of the City are utilised as controlled tips and in these instances where the land is very irregular in contour with deep ravines, the tipping is intended to result in the sites being levelled and made available for recreation also.

Active co-operation between officers of the Cleansing and Health Departments ensures that objectionable conditions which may be associated with this method of refuse disposal are eliminated.

The only complaint received during the year concerned atmospheric dust which was caused by "freighter" wagon traffic approaching a large tip. Water spraying has been adopted and is continued during dry weather with satisfactory results.

The repression of flies, crickets, and beetles has been accomplished by the use of D.D.T compound in spray form which has proved highly successful.

Reference is made to the prevention of rat infestation of tips in the section of the report dealing with the work of the Rat Executive Officer.

Rag Flock Acts, 1911—1928.

The manufacture of upholstery, bedding, and cushions is carried on at 140 premises in the City, and 227 visits were made to these premises in which rag flock is likely to be used as filling material.

20 samples were taken for submission to the Public Analyst. One sample failed to conform to the prescribed standard of cleanliness but the circumstances were not considered to justify the institution of legal proceedings and a cautionary letter was sent to the person concerned.

It was observed that many upholstery repairers are using fillings other than rag flock, which appears to be in short supply. The fillings used were often of an unsatisfactory character from the hygienic aspect but no action was available under the Acts and the regulations made thereunder.

Reference was made in last year's report to the conclusions and recommendations of the Inter-Departmental Committee on the Rag Flock Acts as to the inadequacy of the existing Acts to secure proper cleanliness of rag flock used in the manufacture of upholstery, bedding, and other household furniture and the desirability of filling materials in stuffed toys being required to comply with any standard of cleanliness laid down for bedding and upholstery.

Other desirable features including registration of premises were embodied in the recommendations and their implementation will be awaited with interest having regard to the views of the Inter-Departmental Committee in the potential danger to health arising from the use of dirty filling materials.

Pharmacy and Poisons Act, 1933.

The provisions of the above Act and the Poisons Rules concerning the sale by retail of poisons specified in Part II of the Poisons List are administered by the Health Committee.

The poisons in the list are sold usually in the form of sheep dip, insecticides, disinfectants, hair dyes, household ammonia, and rodent exterminants.

The number of listed sellers of such poisons has risen during the year from 1,183 to 1,500 and a total of £430 was paid in fees to the Department. 440 new applications for listing and 1,060 for retention were received, whilst 123 persons discontinued the sale of the poisons concerned and their names were deleted accordingly from the list. Of the 1,500 premises which are listed, 1,038 are grocers and 294 are hardware dealers; the remainder include hairdressers, drug stores, herbalists, seedsmen, and horticultural stores, and florists.

The District Inspectors made 1,766 visits to premises for the purpose of investigating applications, inspecting records, labelling, and other requirements and the unauthorised sale of poisons. Cautions were issued in 12 instances regarding unauthorised sales and labelling infringements and resulted in the requirements of the Act and Rules being fulfilled.

Exhumations.

The District Sanitary Inspectors were present at 4 exhumations which took place at cemeteries in the City and reported that the requirements of the Home Office regulations as to the observance of due care and decency, etc., were fulfilled. In 2 instances the bodies were re-interred in other parts of the cemeteries, and in the other 2 cases the bodies were removed for cremation.

Cleansing of Filthy or Verminous Premises.

It was necessary to require the cleansing of 16 dwelling-houses reported by the District Inspectors to be in a filthy or unwholesome condition by reason of the neglect of the occupiers.

In 14 cases the requisite cleansing was effected as a result of verbal intimations by the Inspectors or by informal notice, but in 2 cases it was necessary to serve notices under Section 83 of the Public Health Act, 1936 and Section 38 of the Manchester Corporation Act, 1946, and these notices were complied with.

Arrangements exist whereby poor persons may obtain, free of charge, lime and the use of brushes for cleansing purposes upon the issue of an authorisation by a District Sanitary Inspector or Health Visitor. During the year 1,337 lbs. of lime were distributed and 122 brushes were loaned under these arrangements.

Where premises are found to be infested with bugs, action is taken by the Housing Survey Section and reference is made in the report of the Senior Housing Inspector to the measures taken to secure the eradication of vermin.

Under the provisions of Section 37 of the Manchester Corporation Act, 1946, relating to the prohibition of the sale of verminous articles by dealers, an investigation into the sale of a second-hand spring mattress having evidence of bug infestation disclosed that the sale had occurred through inadvertence and a cautionary letter was sent to the dealer. The premises involved were found to be clean and no evidence of vermin was found in the shop or store-room or in other articles on the premises and it was established that it was the dealer's normal practice to examine all articles for evidence of vermin prior to sale.

Inspection of Railway Premises.

Inspections of the 33 railway stations in the City were made during the year, difficulties which had existed previously in this direction having been removed by the operation of Section 43 of the Manchester Corporation Act, 1946, which reads as follows :—

“ For the removal of doubt it is hereby declared that without prejudice to the provisions contained in any other part of the Public Health Act, 1936, the provisions of Part III of that Act shall, in the City, apply to the premises of statutory undertakers.”

The necessity for this provision arose primarily by reason of the refusal by railway companies in Manchester to agree that a sanitary inspector had a right to enter their premises or to agree that the companies were subject to the provisions of Part III of the Public Health Act, 1936.

The inspections made in 1947 revealed unsatisfactory conditions as to sanitary conveniences at 14 of the 33 stations. Representations were made to the railway companies concerned and the defects were remedied at 7 of the stations and the remaining work is in hand.

In addition to the action taken with regard to station premises it was necessary during the summer to require the abatement of nuisance arising from mosquitos which were breeding on overgrown vegetation in a disused canal owned by a railway company. A portion of the canal is adjacent to dwelling-houses and residents had complained of infestation of their homes by the insects, the bites of which had given rise to severe swellings and inflammation.

The mosquitos were identified as being of the species *Taeniorhynchus Richiardi*, which breed in aqueous vegetation, and as surface spraying by oil would have been of limited value in preventing breeding, it was necessary to require the removal of the vegetation from the canal.

Following an informal intimation, a statutory notice was served on the railway company under the Public Health Act and was subsequently complied with, large quantities of vegetation being removed by dredging, after which the mosquito infestation ceased and did not recur during the year.

Noise Nuisances.

Section 40, Manchester Corporation Act, 1946.

The number of complaints received from the public concerning noise occasioned in the course of trade and business appears to be increasing as the new powers of the Corporation to deal with noise nuisance become more widely known.

In nearly every case investigated, the complainant's home is in close proximity to long established industrial premises and in several instances urgent production demands necessitated night shift operation at the factories concerned. Most of the complaints were about noise from exhaust fans, generally associated with machinery, and noise connected with loading and unloading materials, sheet metal, etc. In no case was it necessary to have recourse to legal proceedings as the industrialists concerned invariably accepted suggestions to mitigate or eliminate noise and adopted the best practicable means to deal with the conditions which gave rise to complaint.

In 1 instance the proprietor of a factory situated in a congested and partly residential district installed a siren which emitted the once familiar "all clear" indication and upon being advised, before the siren was put into service, that it may give rise to noise nuisance adopted other means to assist his workers to arrive on time at the factory.

A complaint of an unusual character concerned the noise associated with a seasonal fireworks display taking place in the evenings at a place of public entertainment in the City. It was found on investigation that explosions which occurred at the termination of the display were of such intensity as to waken and frighten young children in the neighbourhood. Representations were made to the management of the premises involved and the feature which had given rise to the complaint was omitted forthwith from the display and no further complaint was received.

Educational.

Training of Student Sanitary Inspectors.

The first of the courses sponsored by the Government for the comprehensive training of ex-service student sanitary inspectors was completed during the year. Manchester inspectors took an active part in the full-time theoretical training of the students and in conjunction with other sanitary authorities in South-East Lancashire and North Cheshire, undertook the subsequent practical training included in the course. This work coincided with a period of exceptional pressure of official duties, but the officers concerned co-operated wholeheartedly in the training scheme, the success of which was reflected in the satisfactory percentage of successful candidates at the qualifying examination of the Statutory Joint Examination Board.

A further course commenced during the year and the full support of the Department has continued.

The work of sanitary inspectors brings them into close contact with the public in the home, workplace, and factory and affords many opportunities of imparting information in the sphere of environmental hygiene.

This aspect of public relations was supplemented by talks given during the year by members of the staff to various groups and organisations on subjects of public interest with which the work of the inspectors is concerned.

Number of Inspections and Visits.

Primary inspections of dwelling-houses under the Public Health Act, 1936	19,779	Dwelling-houses 56,342
Subsequent inspections of dwelling-houses under the Public Health Act, 1936.. .. .	30,123	
Primary inspections of infected houses	1,509	
Subsequent inspections of infected houses	184	
Inspections of dwelling-houses <i>re</i> tuberculosis	654	
Other visits <i>re</i> tuberculosis	148	
Visits <i>re</i> contacts—infectious disease	420	
Visits <i>re</i> infirm persons	8	
Houses let-in-lodgings	1,486	
Common lodging houses	460	
Tents, vans, and sheds	54	
Homes of outworkers	909	
Canal boats	608	
Bakehouses	274	33,308
Food preparation premises	224	
Restaurant, etc., kitchens (including factory canteens)	495	
Hawkers of food and storage premises	748	
Butchers' shops and bacon stores	73	
Shops <i>re</i> sale of food	192	
Markets <i>re</i> sale of food	17	
Hotels, beerhouses, etc.	146	
Slaughterhouses, etc... .. .	6	
Visits by sampling officers to obtain samples of water for chemical and bacteriological examination	38	
Visits by sampling officers to obtain samples of food and drugs.. .. .	3,295	
Visits to registered premises of artificial cream manufacturers	2	
Visits to registered premises of wholesale margarine dealers	102	
Offensive trades	25	
Observations <i>re</i> effluvium nuisances	241	
Works boiler plant <i>re</i> smoke abatement	532	
Refuse tips—Corporation	44	
Refuse tips—Private	88	
Stables	112	
Piggeries	97	
Sanitary accommodation at schools	55	
Sanitary accommodation in parks	174	
Public sanitary conveniences	86	
Cesspools	24	
Land	353	
Watercourses	46	
Streets, passages, roadways, and footpaths.. .. .	856	
Exhumations	4	
Factories	1,101	
Shops <i>re</i> Shops Acts.. .. .	424	
Cinemas, theatres, dance and billiard halls.. .. .	70	
Churches	43	
Premises in connection with Rag Flock Acts	227	
Other business premises	2,146	
Premises for testing drains	61	
Visits <i>re</i> Pharmacy and Poisons Act, 1933	1,766	
Inspections of works in progress—drainage inspectors	4,800	
Miscellaneous visits	14,321	
Total	89,650	

WORK OF THE SPECIAL INSPECTORS.

The following statement indicates the work done by the two Special Inspectors:—

Number of visits *re*—

Infectious diseases	155
Food poisoning	16
Food contamination.. .. .	44
Water supply	12
Vermin—Infested premises	71
Institutions	34
Tips	15
Nursing homes	47
Nursing agencies	12
Nuisances	21
Swimming baths	59
Paddling pools	10
Export of washed rags	24
Public Health exhibitions	42
Public Health lectures	10
Massage or special treatment establishments.. .. .	203
Steam disinfectors	15
Ministry of Health training scheme for student sanitary inspectors	82
Miscellaneous	48
Tests of water applied at swimming baths.. .. .	70
Tests applied to steam disinfectors	4
Burial grounds	74

Food Contamination and suspected Food Poisoning.

Investigations were carried out in suspected food poisoning cases at 4 canteens, 3 schools and 15 dwelling-houses where illness with symptoms of gastro-enteritis had occurred. Suspected foods were taken where possible and faeces samples from food handlers and patients were obtained in many cases and submitted for bacterial examination. Organisms of the salmonella or dysentery groups were not isolated in any of the cases.

In one investigation involving illness to 12 persons from 4 households, who had consumed meat pies, it was found that cultures from the pies gave a heavy mixed growth of a coliform organism and proteus morgani. The conditions at the place of manufacture were found to be unsatisfactory and remedial action was taken.

The vehicle of infection in another instance was found to be due to a prepared meat called “Lincolnshire Aislet.” Some 8 householders were affected in Manchester and cultures from the meat revealed the isolation of staphylococcus aureus in large numbers. The meat, of which one ton had been distributed throughout the country from a south country town, had caused similar illness in other towns. The Medical Officer of Health of the area where the food was prepared was notified. It was ascertained that the sale of the meat had been stopped, all unsold meat had been recalled and an investigation was made at the place of manufacture.

In other cases, where no actual pathogenic organisms were isolated, it was suspected that the illness was due to toxins as the incubation period was generally short and the patients rapidly recovered. The method of preheating meat and reheating it some days later was also a contributory and likely factor to illness both at canteens and in households.

There were no deaths.

Leprosy.

In November a case of leprosy was reported in a native of Sierra Leone, who was living in lodgings in the City area. He was admitted to Monsall Hospital for treatment whilst the house, bedding, and other belongings were effectively disinfected.

Later the man was conveyed to Liverpool and embarked on a ship for his native land so that the long course of treatment required could be continued at a hospital near his home.

Contacts were kept under observation, but no signs of infection were observed.

Insect Pests.

The Special Inspectors continued to be called upon to advise with regard to the eradication of insect pests in domestic and business premises.

The walls and ceilings of the day nurseries and 11 child welfare centres were again sprayed with D.D.T. solution as a precaution against house-fly infestation. This treatment again proved effective.

Swimming Baths and Paddling Pools.

The sampling of water from swimming baths has been continued throughout the year at the public baths and the privately owned establishments. Visits were also made to paddling pools during the poliomyelitis outbreak and samples obtained for examination. A number of baths and paddling pools were closed during the outbreak. 59 visits were made and 39 samples were submitted to the Public Health Laboratory for bacteriological examination. Tests for acidity-alkalinity and free residual chlorine were carried out on 70 occasions during the visits.

Export of Washed Rags, Second-hand Clothing, etc.

Inspection of these materials is carried out as a hygienic measure properly coming within the scope of the department and to assist business firms in attaining the standard of cleanliness required by the regulations made by the various Government Departments who use such materials and by Importing Authorities in instances of export.

During the year 12 tons of washed rags were dealt with and certificates issued. Certificates of efficient disinfection were also issued for 880 articles of second hand clothing which were being exported.

Establishments for Massage or Special Treatment.

During the year, 203 inspections were made of the licensed establishments. There were no infringements of the byelaws and the general standard of hygiene at premises and equipment was satisfactory.

Of the 124 licences issued, 103 were renewals and 11 were granted to new applicants. The number of licences ceded during the year was 9 leaving 115 establishments licensed at the end of 1947.

Licences were refused to 3 applicants, mainly on the ground that their technical qualifications were not such as could be considered reasonably necessary.

Building of Dwelling-houses on "made" land.

A fairground and caravan site which the Corporation proposed to acquire compulsorily for the erection of prefabricated houses was known to have been used as a tip. In fact "fly" tipping had taken place in recent years. It was suggested that "night-soil" had been deposited there in the distant past. There was no doubt a stream had been culverted and a vale filled in many years ago at this particular site.

The Medical Officer of Health was invited to give his opinion on the use of the "made" land as a site for dwelling-houses from a public health aspect.

Trial holes of varying depths were sunk about the site and augurs were bored deeper to ascertain the nature of the earth. Samples of the soil were obtained and submitted to the Public Analyst for examination. There was nothing seen in or on the site, or revealed by the analysis of the samples which could be considered objectionable or dangerous to public health as a building site for dwelling-houses, particularly when it was proposed to erect them on concrete rafts.

Many caravan dwellers had resided on the land for years and there was no evidence to indicate that they had suffered ill health as a result of the occupancy of the site.

Burial Grounds.

Visits and inspections were made to burial grounds for a number of reasons.

At one private burial ground damage was caused to graves and boundary walls by unauthorised persons and one vault had been partly opened exposing the coffins to view.

At a church in the City coffins in the underground vaults were exposed to view through the iron grilles and were in a state of dilapidation. In these cases the owners or trustees were notified and the unsatisfactory conditions were remedied by the sealing up of the vaults and the rebuilding of the boundary walls to ensure privacy and prevent the entrance of unauthorised persons.

A general survey of the burial grounds in Manchester necessitated visits to 23 such places, particularly those attached to places of worship. Representations, based on the certificate of the Medical Officer of Health, that 6 of the burial grounds should be closed on grounds of danger to public health, were made to the Minister of Health under the Burial Acts. A public enquiry, conducted by an Inspector of the Ministry of Health, was held in Manchester, when the graveyards in question were visited and evidence for and against closure was tendered.

An order for the closure of the burial grounds has not yet been made, but the Minister of Health has indicated that it is his intention to make representations under the Burial Act, 1853, to His Majesty in Council for the closure of 5 of them.

HOUSING SURVEY SECTION.

By Arthur Moss, M.R.San.I., Senior Housing Inspector.

STAFF.

Senior Housing Inspector.
 Assistant Senior Housing Inspector.
 8 Housing Inspectors.
 6 Clerks and typists.

There is at present a deficiency of 5 Housing Inspectors and 1 typist, but 6 temporary visitors are engaged on work in connection with the overcrowding provisions of the Housing Act, 1936.

Clearance Areas and Individual Unfit Houses.

Housing Act, 1936, Sections 25 and 11.

The Minister of Health's Circular 1866 (Postponement of Works Order) continues to limit the operations of the Section. Despite the shortage of alternative accommodation, it has been necessary, because of dangerous conditions, to serve notice to quit on 16 premises in the New Cross confirmed clearance area. 2 were lock-up premises and 14 were occupied dwelling-houses. 2 families from these houses found their own accommodation whilst the remaining 12 were rehoused by the Corporation. There are now 62 families (1 in Oldham Road Area and 61 in the New Cross Area) still awaiting rehousing under the orders confirmed prior to 1939.

In the areas represented but not confirmed because of dangerous conditions, it has been necessary, in advance of the Ministry's confirmation, to deal with 160 houses as individual unfit houses under Section 11. This action has been taken for the most part as a result of notices served by the City Architect for dangerous conditions and at the request of the owners who, realising that demolition would follow the Ministry's confirmation, were unwilling to incur expense on materials and labour on temporary repairs. 183 families were moved, 130 found their own accommodation, and in 53 cases it was provided by the Corporation. 56 of the vacated houses have been demolished whilst 104 have been bricked up to prevent access and to act as protection to adjoining houses which might be imperilled by their demolition.

The proposed St. John's clearance area originally contained 615 dwelling-houses but by reason of demolitions up to 1946 had been reduced to 473, of which only 415 were occupied. During the year 6 more houses were vacated and 13 demolished, leaving 460 houses in the area, 409 of which are occupied. 3 of the houses vacated this year were due to action under Section 11. 2 have been demolished and the tenants rehoused, leaving 1 house, containing 2 families, awaiting rehousing.

At the end of last year 36 tenants of houses outside clearance areas, represented under Section 11, were awaiting rehousing. A further 159 were represented during the year. Of these 195 houses, 159 were vacated during the year leaving 36 houses outstanding to be vacated during 1948. At December, 1946, 108 houses were awaiting demolition after tenants had been rehoused, and, with the 159 represented during the year, made a total of 267 houses to be demolished. Of these 134 have been demolished during the year and 133 still await demolition. Most of these have been bricked up to prevent access. 39 families were awaiting rehousing at December, 1946, and 171 families were added during the year, making 210 to be rehoused. 170 families have been found accommodation leaving 40 families outstanding to be rehoused in 1948.

The cumulative totals and the work done during 1947 under Sections 11 and 25 are shown in the following table (Table A) :—

Table A Clearance Areas Progress Report, 1933—1947.

	Number of Houses in Area	Houses Vacated		Balance Outstanding to be Vacated	Houses Demolished		Balance Outstanding to be Demolished	Number of Families in Area	Families Moved to Dec., 1946			Families Moved during 1947			Balance Outstanding Families to be Rehoused
		Total to Dec., 1946	During 1947		Total to Dec., 1946	During 1947			By Corporation	Own Account	Total	By Corporation	Own Account	Total	
Clearance Areas confirmed and completed	5,162	5,162	—	—	5,162	—	—	5,796	1,392	1,404	5,791	—	—	—	—
Clearance Areas confirmed. Not completed—															
Miles Platting	688	688	—	—	687	—	1	692	584	108	692	—	—	—	—
Collyhurst II.	381	381	—	—	380	—	1	418	343	75	418	—	—	—	—
Ardwick	863	863	—	—	862	—	1	816	654	162	816	—	—	—	—
Oldham Road II.	8	7	—	—	6	—	2	8	6	1	7	—	—	—	—
Broom Lane	12	12	—	1	11	—	1	3	—	3	3	—	—	—	1
New Cross	1,787	1,712	16	59	1,652	5	130	1,727	1,183	463	1,652	12	2	14	61
Oldham Road (New Cross) Area 17	142	142	—	—	—	—	142	143	26	117	113	—	—	—	—
	3,881	3,805	16	60	3,598	5	278	3,807	2,802	929	3,731	12	2	14	62
Clearance Areas represented but not confirmed—															
Bradford Road	1,841	419	60	1,362	376	42	1,423	1,948	53	368	421	21	41	65	1,462
St. George's	1,183	241	70	872	243	11	929	1,179	5	167	172	20	71	91	916
Hutchins Street	61	4	2	55	3	—	58	62	2	1	3	3	—	3	56
Harpurhey	281	—	8	276	—	—	284	299	—	—	—	—	—	—	299
Monday Street	45	5	6	34	5	—	40	70	—	11	11	6	—	6	53
Enoch Street	31	—	—	31	—	—	31	32	—	—	—	—	—	—	32
Ruth Court	11	7	—	4	7	—	4	14	—	10	10	—	—	—	4
Fog Lane	10	—	—	10	—	—	10	9	—	—	—	—	—	—	9
Oldham Road (New Cross) Areas 1 to 16 ..	786	118	14	654	88	3	695	844	5	85	90	3	15	18	736
	4,252	794	160	3,298	722	56	3,474	4,457	65	642	707	53	130	183	3,567
Clearance Areas inspected but not represented—															
St. John's	615	200	6	409	142	13	460	671	6	157	163	5	1	6	502
Individual unfit houses not in clearance areas ..	685	490	159	36	418	134	133	634	339	85	424	163	7	170	40
Total	14,595	10,451	341	3,803	10,042	208	4,345	15,365	7,604	3,217	10,821	233	140	373	4,171
Houses dealt with as individual unfit houses—															
(a) Not in clearance areas	685	490	159	36	418	134	133	634	339	85	424	163	7	170	40
(b) In clearance areas:															
Bradford Road	95	66	22	7	47	30	18	86	53	3	56	21	1	22	8
St. George's	30	5	21	4	3	6	21	30	5	—	5	21	—	21	4
Hutchins Street	7	4	2	1	3	—	4	7	2	1	3	3	—	3	1
Oldham Road (New Cross)	12	6	3	3	2	4	6	13	5	2	7	3	—	3	3
St. John's	16	12	3	1	6	2	8	16	9	2	11	3	—	3	2
Monday Street	6	—	5	1	—	—	6	7	—	—	—	6	—	6	1
Total	851	583	215	53	479	176	196	793	413	93	506	220	8	228	59

Abatement of Overcrowding.

Housing Act, 1936. Section 58, etc.

The number of cases of overcrowding at the end of 1946 was shown to be 1,345. During the past year the survey of the overcrowding position was continued by the special temporary staff retained for this work. 412 new cases of overcrowding were reported by them and 212 cases where overcrowding was abated leaving at the end of the year, 1,545 houses overcrowded on the National Standard. The attention of the Director of Housing has been drawn to these cases with a view to priority of consideration in rehousing.

In the 212 cases where overcrowding was abated 136 were found suitable houses by the Housing Department, 60 moved on their own account and in the remaining 16 the overcrowding was abated by a temporary or permanent reduction in the size of the family. 8 of the families allotted to Corporation houses had their furniture and effects treated by hydrogen cyanide fumigation at Monsall Disinfecting Station.

The position as at December 31st, 1947, in respect to overcrowded houses and families is as follows :—

Overcrowded houses—	Families	Adults	Children
1,197 containing 1 family	1,197	6,654	2,267
270 „ 2 families	540	1,751	450
69 „ 3 „	207	492	122
9 „ 4 „	36	68	18
<hr/> 1,545	<hr/> 1,980	<hr/> 8,965	<hr/> 2,857

The increase in the overcrowding figures as compared with last year is an indication that the rate of new building is not sufficient to keep pace with housing requirements. 1,197 families are overcrowded because the house is too small for them and 348 houses are overcrowded by reason of lodger families and children having to share accommodation which is inadequate for their needs.

Form required by the Ministry of Health.

(a)	(i)	Dwellings overcrowded at the end of 1947	1,545
	(ii)	Families dwelling therein	1,980
	(iii)	Persons dwelling therein	11,822
(b)		New cases of overcrowding notified during the year ..	412
(c)	(i)	Cases of overcrowding relieved during 1947	212
	(ii)	Persons concerned in such cases	1,063
(d)		Particulars of any cases in which dwelling-houses have again become overcrowded after the Local Authority have taken steps for the abatement of overcrowding	Nil

Table B shows the number of overcrowded families classified according to their unit persons under the Housing Act standard and the permitted numbers of the houses occupied by those families. The number of families shown below the thick stepped line are overcrowded on "permitted number," irrespective of whether "mixing of sexes" occurs or not. The figures above the line indicate the number of families where overcrowding by mixing of sexes was reported without the number of occupants exceeding the permitted number.

The major portion of overcrowding occurs in 1,020 houses having a permitted number of 5 to $6\frac{1}{2}$, *i.e.*, houses of the two-bedroom type.

Eradication of Vermin, etc.

Public Health Act, 1936, Sections 83—85.

(A) *Vermin infested premises* (Public Health Act, 1936, Section 83)

610 complaints of infestation were received, of which 36 applied to business premises and 574 to dwelling-houses. Infestation by bed bugs was the chief complaint.

The eradication of the vermin was carried out successfully by HCN at 23 business premises and 52 dwelling-houses; in addition 337 dwelling-houses were treated with D.D.T. The remainder were treated privately by insecticidal spraying and washing after advice had been given to the tenants on the method of application.

In accordance with the requirements of the Ministry the following table summarises the work done. Privately-owned houses, Corporation houses, and business premises are shown separately :—

Premises found to be verminous	Control measures advised	Fumigation with HCN	Other methods of treatment
Privately-owned houses :			
Minor infestations ..	142	9	{ 1 DDT 132 Insecticidal spraying; sulphur dioxide and chlorinated washes.
Serious infestations ..	97	43	{ 1 DDT. 53 Insecticidal spraying; sulphur dioxide and chlorinated washes.
Corporation houses	335	—	335 DDT.
Business premises :			
Minor infestations ..	17	7	10 } Insecticidal spraying
Serious infestations ..	19	16	3 } sulphur dioxide and chlorinated washes.
	610	75	535

(B) *Furniture and Effects* (Public Health Act, 1936, Section 84).

Contracts are placed each year with a removal contractor and a fumigator so that tenants removing from a vermin infested house to a Corporation house or privately owned house can have their furniture fumigated with HCN before transfer to the new house.

Table B Overcrowding Survey of the City of Manchester, 1947. Houses of Working Class Standard.

The Corporation meets the whole cost of removals from clearance areas and individual unfit houses. Tenants from overcrowded houses are required to pay 40s. towards the cost of removal and a similar charge is made to other tenants moving to Corporation houses from houses outside the "clearance" or "individual unfit house" classes. Other tenants moving from one private house to another are asked to pay the full removal cost.

In all cases the fumigation is carried out by the contractor at Monsall Disinfecting Station at the expense of the local authority in accordance with Section 84.

The removals effected during the year are as follows :—

From individual unfit houses and clearance areas to Corporation houses	234
From houses outside clearance areas to Corporation houses ..	287
From overcrowded houses to Corporation houses	8
Fumigation and removal to private houses	8

In addition there were 5 cases where mattresses or bedding infested with moths or similar pests needed fumigation. This work was carried out at a nominal charge.

Tenants whose furniture is subjected to fumigation in transit are offered facilities to attend Monsall Disinfecting Station in order to have their personal clothing cleansed and so eliminate every possibility of the transfer of vermin to the new address. 763 adults and 662 children took advantage of this service.

Applications for rehousing on grounds of ill health.

A number of cases claiming priority in rehousing on health grounds are reviewed each year. The number of cases dealt with in this respect during the year is 1,392.

"Share Your Homes" Scheme.

53 applications for registration under the scheme were investigated which resulted in 23 being registered, 16 withdrawn, 12 proved unsuitable, and 2 are in abeyance at the tenant's request.

The total number registered to date is 146.

Temporary Staff.

The services of 7 members of the temporary staff engaged on billeting surveys were retained to carry out a survey of overcrowded houses and to complete statistical work in connection with the former overcrowding survey. One member retired on reaching the age limit.

4,344 visits were made to ascertain the number of occupants in overcrowded houses and houses likely to become overcrowded due to the increasing ages of children.

4,861 visits were made to check reported demolition of property, and 323 visits were carried out to measure the rooms in houses for the calculation of the permitted number. These permitted numbers are supplied to the owners or agents for insertion in the rent book, as required by the Housing Act.

Billeting of Workers.

The billeting of persons coming to the City for employment is still continued by the permanent staff as requests are received. This is in accordance with the Ministry of Health's request for local authorities to continue this service. 218 billets with board and lodging were found during the year and 222 workers were billeted.

**RATS AND MICE (DESTRUCTION) ACT, 1919.
INFESTATION ORDER, 1943.**

By G. H. Adcock, Cert. R.S.I.

STAFF.

Full time—

G. H. Adcock.. .. .	Rodent Executive Officer
G. H. Ackerley	Assistant Rodent Executive Officer
4 Clerks	
9 Foremen	
45 Rodent Operators	

The above Act and Order are administered by the Rodent Executive Officer through the Rodent Control Section of the Health Department, operating from premises in Joddrell Street, Manchester, 3, where staff and equipment have been set up to comply with the suggestions and requirements of the Ministry of Food. By the Transfer of Functions (Infestation Control) Order issued in September, 1947, all property and rights held or enjoyed by the Minister of Health or the Minister of Food immediately before the coming into operation of the said Order, and all liabilities to which the Minister of Health or the Minister of Food was then subject in connection with any of these, were transferred to the Minister of Agriculture and Fisheries. This change has not materially affected the accepted Ministerial policy so far as the Act and Order are concerned, since the legislation governing infestation of land by rodents still places primary responsibility on *occupiers*, who are required to take such steps as may be necessary and reasonably practicable, for the destruction of rats and mice in or on any land and for preventing such land from becoming infested. The definition "land" includes any buildings and any erections on land and any cellar, sewer, drain, or culvert in or under land.

In all cases of rat infestation, the importance of *locating the source*, if possible, cannot be over-emphasised, since, until this is done, any treatment for destruction carried out can only be temporarily successful, and infestation continues to recur. Yet, owing to the weakness of the Act and Order, unreasonable calls have to be made on *occupiers* for essential work in location such as taking up living room floors, cellar, yard, and water-closet chamber floors, in order to establish the presence of a suspected source and remedy any defects found. In this City, however, as a general rule, owners and agents co-operate well with the Department, knowing that rodent infestation is doing material damage to their property, constantly spoiling and infecting food, destroying the materials of their tenants, etc. It is pleasing to record that some owners request the Department to make an inspection of the premises and, when notified of the results, actually do carry out all the necessary structural and drainage repairs.

One of the important features in connection with rat infestation is that the presence of rodents in premises does not necessarily indicate that the source can be found in those particular premises, inasmuch as rats may have left their source in search of food or nesting-material. It is consequently necessary to inspect properties, whether they be dwelling houses or business premises, on a "block" basis, covering at one time a fairly large area of buildings.

So far as drainage defects are concerned, it should be noted that, since the powers conferred by the Act and Order are in addition to powers previously delegated to a local authority in health matters, the Department is able to deal effectively with recalcitrant owners where such defects are obvious and the owner, being notified, takes no action. The drains can then be examined under a statutory notice (Public Health Act, 1936) and such examinations are supervised by the Rodent Executive Officer or his assistant.

The Department works in close co-operation and has cordial relations with the Director and officials of the Infestation branch of the Ministry, whose policy is discussed at Workable Area, Regional, and Consultative Committees, the Rodent Executive Officer being chairman of the first and a member of the others.

Complaints.

Under the Infestation Order, 1943, rodent infestation is compulsorily notifiable, but this fact apart, the activities of the Department have resulted in the public becoming rodent-conscious. Consequently, complaints of infestations continue to arrive in increasing number.

As rodents are mobile creatures, ranging their activities over large areas, the method of investigation employed resolves itself into a tracking down from evidence presented, such as smears, burrows and scrapes, runways, gnawing, droppings, footmarks, damage to goods, and means of entrance and passage, directing attention in particular to the origin or source of these activities. It will be appreciated that these investigations entail a great deal of time, as large areas may be involved, but unless a clear picture of the areas is obtained, after-treatment for the purpose of destruction may be ineffective.

According to the degree of infestation discovered, occupiers are given advice and destruction measures are carried out by the Corporation service on receipt of a signed undertaking to pay the costs incurred.

The total number of complaints dealt with was 1,382, and during course of investigation of these, 6,755 premises were visited. 1,228 premises were infested by rats, 421 by mice, whilst at the remainder there was no visible evidence of infestation.

Table 1 indicates the number of business premises and dwelling-houses infested, and analyses the rat-infestation.

Nature of Premises Infested.

The infestation of any premises is dependent on three main factors—harbourage, food, and water. Where these exist together in abundance, ideal conditions for breeding prevail. In some cases, food supplies in the premises themselves supply the main attraction; in other instances rodents are brought into the premises in packages of various types.

The sewers of the City, being of different construction and types—good, bad, and indifferent—constitute an infestation classed as Reservoir. Where a breakdown of the drainage system of premises occurs, or premises are in close proximity to a bad sewer, infestation takes place through burrowing. Burrowing or undermining may take place some distance away from the actual premises, but rats, being nocturnal in their habits, emerge from these sources and infest premises by means of short doors, broken basement windows, general defects in structure, etc.

Table 2 summarises the nature of premises visited in response to complaints and relates this factor to the infestation found. Dwelling houses constitute the largest group of property visited in response to complaints, due to their being in close proximity to some established source, and the fact that in terraced buildings several may be affected from a single source. 605 dwelling-houses were found to be internally infested, 205 externally. 329 were mouse infested and 4,705 disclosed no visible evidence of infestation. (Total—5,844.) Of 911 business premises visited, 418 were rat-infested, 92 mouse-infested, with no evidence of infestation at 401. Shops predominate as the chief type of business property infested, together with factories and workshops.

Causes of Infestation.

The importance of locating the source of infestation has already been emphasised and the part which drainage defects play in acting as causes of infestation has also been referred to in earlier sections of this report.

Many of the sewers are old type, brick or brick and flag covered, with disused and defective sewers and drains connected therewith, from which rats are able to burrow upwards to business premises and private dwellings, in search of food. They are encouraged not only by actual stores of food, but by the presence of food-waste, litter, debris, food paper wrappings. In addition to food, of which they can be relied upon to discover the best—discarding the second-rate—rats need material to build comfortable nests. All forms of edible waste—garbage, etc.—are not only evidence of commodity waste but are also means of attraction and harbourage for rodents. The presence of these encouragements to infestation indicates carelessness and is none the less injurious to the health of the public.

20·2 per cent. of premises visited in connection with complaints were associated with defective or disused drains or sewers, while 18·1 per cent. of infestation was caused mainly by the nature of the business carried on at infested premises or in their vicinity. Next in importance was the neglect in protection of food-scrap, wrappings, etc., accounting for 16·7 per cent. of infestation. Many derelict premises in different parts of the City provide good harbourage and give rise to infestation in buildings in the immediate vicinity. 16·5 per cent. of infestation was caused in this manner.

Causes of infestation are classified under some eight headings in Table 3. (Note that this table deals with *rat* infestation only.)

Tracing of Rat Burrows in Relation to Drainage Infestation.

In all cases of burrowing or undermining of surfaces, whether in public or private premises, the basic cause, with very few exceptions, is to be found in some form of drainage or sewer defect. The work of locating such defects is of great importance and the knowledge on which it is based is only acquired by experience, since there is very little visible evidence to work upon. Tracing of burrows is a straightforward matter in the case of land controlled by the City Surveyor, as here complete co-operation exists. In the case of private premises, *i.e.*, yards, cellars, and cul-de-sac passages, the position is rather different, although, as has been previously mentioned, owners and agents, realising the damage done to their property, with the attendant discomforts, generally co-operate without much trouble.

Table 4 sets out in detail all the work done in relation to drainage.

Rodent Control Survey.

A survey of the area under the control of the Corporation has been made in accordance with the requirements of the Ministry. Appropriate cards are filed of the results obtained and concurrent with the survey, treatment for the destruction of rodents has been carried out. It will be appreciated that from its commencement in the Northern area—(figures for which were detailed in last Annual Report) to completion of Southern area, the Survey has taken a period of just over a year, with the result that the public, now aware that a Department dealing with rodent infestation exists, have no hesitation in sending in their complaints. In connection with the Survey, a maintenance treatment of the public sewers has been carried out by the City Surveyor's Department, and under an arrangement made between the Ministry and the Public Health Committee, a free treatment of dwelling-houses was also carried out.

Table 5 makes an analysis of conditions found in each ward.

Type of Premises Visited on Survey.

Table 6 extends the information obtained on the Survey and shows the type of premises dealt with. It will be seen that, of the various type of premises inspected, 2,093 were rat-infested out of a total of 214,248, and 19,158 were mouse-infested. It should be realised that in this class of work, premises may be free from infestation, say, one week (during survey) and become infested the next. Consequently a continual search has to be maintained to check information already obtained.

Destruction Measures by Corporation Service.

1,775 premises were treated by the Corporation service during 1947, for the destruction of rodents. At 1,732 of these, the method employed was poisoning, at 18 poisoning and trapping in conjunction, and at 25, trapping alone.

Systematic poisoning measures involve pre-baiting; poison-baiting, and post-baiting (the latter acting as a check-up on any remaining infestation).

72,905 pre-baits were laid at 899 business premises and 876 dwelling houses. 74.7 per cent of these were taken by the rodents.

21,212 poison baits were laid. 69.1 per cent were taken.

Of 17,965 post-baits laid, only 8.4 per cent. were taken—a standard of the high efficiency of the poisoning methods employed by the service.

Some 182 traps (mainly of Nipper variety) were employed and 73 rats and 8 mice were killed as a result of trapping operations.

Dead rats picked up as result of Corporation service operations	1,330
Dead mice picked up as result of Corporation service operations.. ..	1,361

Estimated kill of rodents (Ministry of Food calculation).

Business premises	24,384 Rats	8,534 mice.
Dwelling-houses	5,091 Rats	3,279 mice.
Total estimated kill of rodents ..		41,288.

Premises Cleared.

As a result of Corporation treatment, 953 premises (53·7 per cent. of those treated) were written off subsequently as free from infestation.

Destruction Measures carried out by Private Operating Companies.

Private companies carry out destruction measures on contract at certain premises and, as the location of the source of infestation does not come within their category of work, reliance is generally placed on some form of poisoning measures to keep infestation under control. Only in a few isolated instances is information tendered to this Department of the methods used and results obtained by these companies.

One operating company reports having laid 21,000 poison baits, 5,000 of which were taken, with a total of rodents killed, of 276 rats and 252 mice.

Another company placed 17,300 rat-baits and 720,000 mouse baits, but in this instance no figures are available of number of these baits taken or of number of dead rodents picked up.

It is clear, therefore, that a true picture of the destruction of rodents in the City cannot be obtained owing to lack of information from the general public and private operators.

Destruction Measures by other Corporation Departments.

Apart from the Corporation service, a constant attack on rats is maintained by some Departments of the Corporation (*e.g.*, Cleansing, Waterworks, Gas, Electricity, etc.). It will be appreciated that such premises as refuse destructors, tips, markets are difficult to maintain in a non-infested state, consequently this co-operation in destruction is of great value.

In all Corporation Departments for which returns are available, a total of 1,843 poison baits was laid, 1,638 of which were taken. This resulted in a kill of 808 rats and 21 mice. A further 4,538 rats and 207 mice were caught by means other than poison—traps, etc.

Extermination of Rats in Sewers.

This class of work is carried out by a special staff of the City Surveyor's Department and, in accordance with the requirements of the Ministry, an initial treatment was carried out, with subsequent test baiting of certain man-holes, followed up by maintenance treatments.

The results of this work are tabulated below :—

	Manholes test-baited.	Manholes baited.	Manholes showing Takes.
Balance of Initial Treatment ..	109	1,266	219
No. 1 Maintenance Treatment ..	1,447	3,916	1,122
No. 2 Maintenance Treatment ..	—	2,536	789
	1,556	7,718	2,130

Revisits to Infested Premises.

During the period of the Survey and in connection with complaints, it is necessary to check upon the efficiency of measures carried out by revisits to premises. Where necessary further treatments are then carried out, and where several revisits have been made and no visible evidence of infestation discovered, premises are written off as clear from infestation.

If it were possible to guarantee that premises were ideally rat-proofed and effective precautions taken, clearance might be of a permanent nature, but unfortunately, as a rule, such is not the case. Consequently re-infestations do occur, after varying periods, at cleared premises.

In 1947 1,501 revisits were made to premises under observation.

Premises visited and Estimated Kill (1942 to date).

These figures are included to give a general idea of comparative figures over a few years.

1942—2,003 premises visited in response to complaints.

1943—1,604 premises visited in response to complaints.

(No record of estimated kill was available in these two years.)

1944—1,871 premises visited in response to complaints.

Estimated kill : 24,260 (19,000 rats, 5,260 mice).

1945—1,517 premises visited in response to complaints.

Estimated kill : 6,350 (4,050 rats, 2,300 mice).

1946—993 premises visited in response to complaints.

Estimated kill : 21,775 (14,516 rats, 7,259 mice).

1947—6,755 premises visited in response to complaints.

Estimated kill : 41,288 (29,475 rats, 11,813 mice).

Graphs.

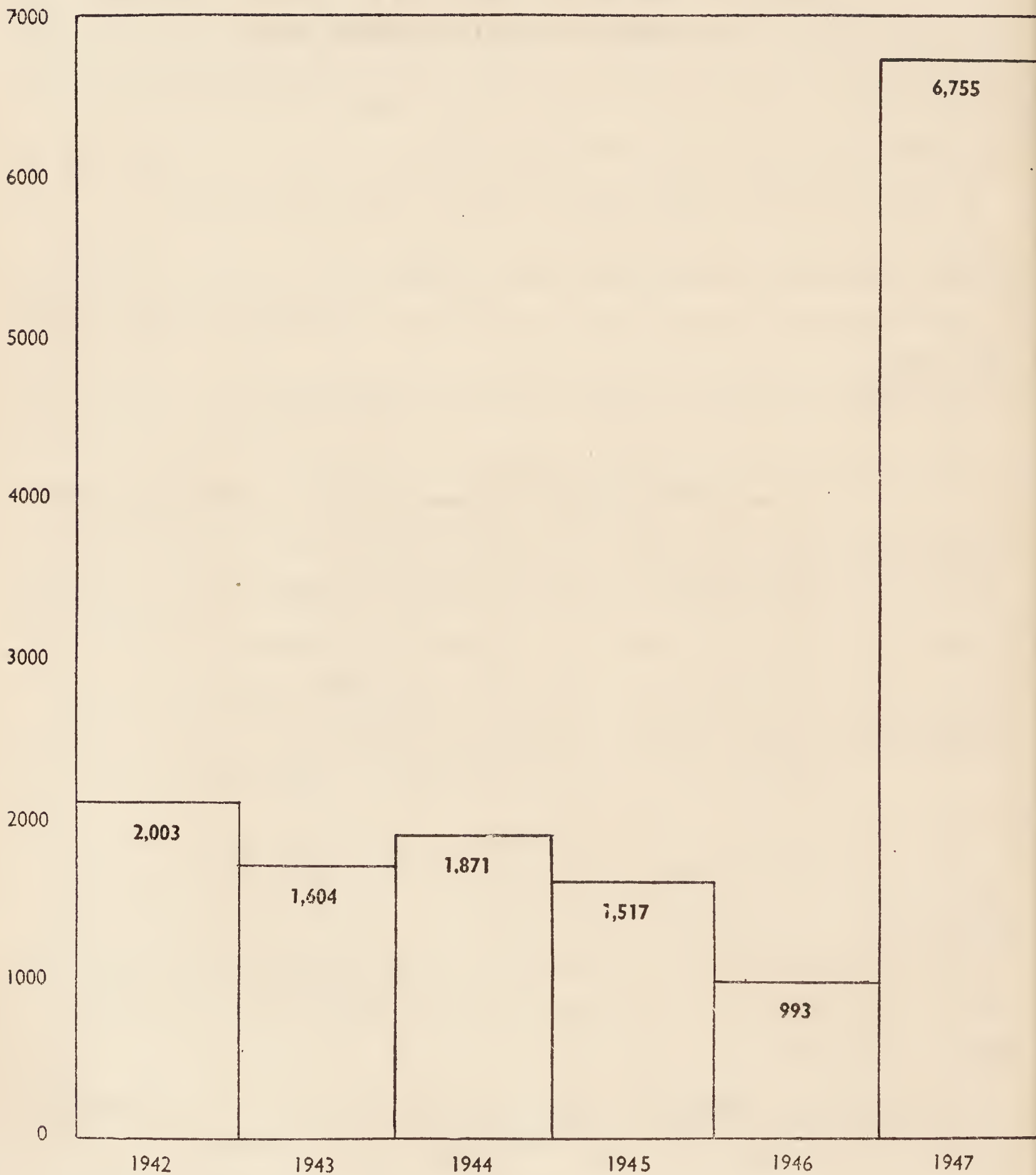
No. 1 illustrates the first part of the information given above—*i.e.*, the number of premises visited in connection with complaints from the public over the years 1942–1947.

No. 2 shows the increase in number of premises treated by the Corporation service during last year, the graph being based on monthly figures.

No. 3 indicates the actual and estimated kill of rats and mice for each month during 1947.

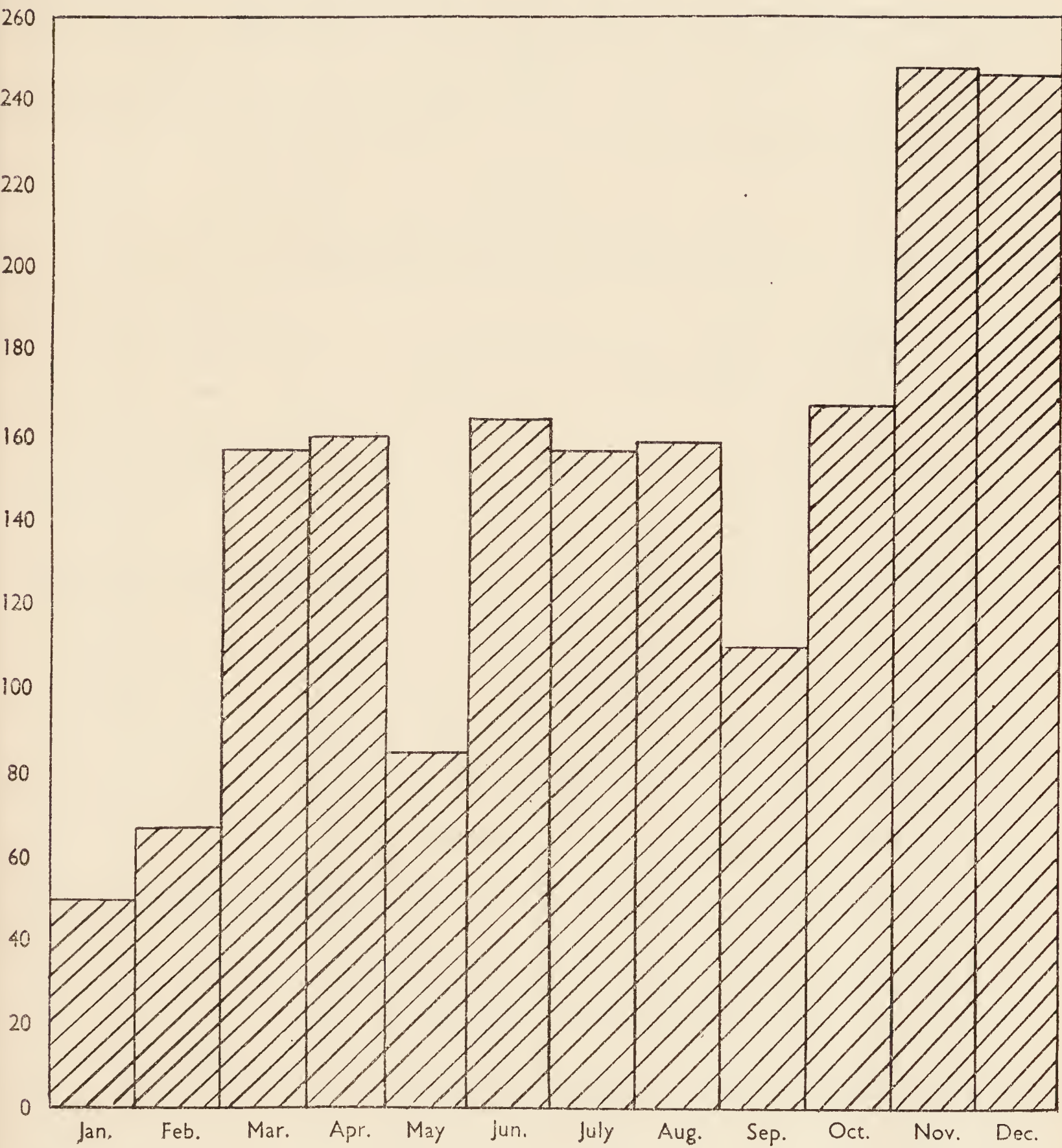
Graph 1.

**NUMBER OF PREMISES VISITED IN RESPONSE TO COMPLAINTS
OVER THE PERIOD 1942 - 1947.**



Graph. 2

NUMBER OF PREMISES TREATED BY CORPN. SERVICE
IN EACH MONTH DURING 1947.



Graph 3.

**CORPORATION SERVICE - RODENTS CAUGHT & ESTIMATED KILL
IN EACH MONTH DURING 1947.**

Rodents Caught



KEY.

- Mice—Actual Kill (Bodies picked up).
- Rats—Actual Kill (Bodies picked up).
- Estimated Kill (M. of F.) of Rodents.

Table 1.

Number of Premises dealt with in response to Complaints, 1947.

Number of Premises Rat-infested							Number of Premises Mouse-Infested		Premises—No Evidence of Infestation	
Internal		External		Category of Infestation						
Business Premises	Dwelling-Houses	Business Premises	Dwelling-Houses	Reservoir	Major	Minor	Business Premises	Dwelling-Houses	Business Premises	Dwelling-Houses
394	605	24	205	1	17	1,210	92	329	401	4,705
1,228				1,228			421		5,106	

Premises visited in response to 1,383 complaints : 6,755

Table 2.

Nature of Premises Infested—1947.

Type of Premises	Rat-Infested		Mice Infestation	No Evidence of Infestation	Totals
	Internal	External			
Restaurants, licensed premises, etc.	17	1	2	12	32
Premises where food is prepared, sold, or stored	30	—	17	18	65
Other premises attractive to rats : garages, land, wooden structures, etc.	12	7	2	12	33
Farms, tips, etc.	4	1	—	—	5
New buildings, etc.—					
Factories, workshops, workplaces ..	113	5	15	38	171
Warehouses	24	1	5	28	58
Shops	114	6	28	228	376
Institutions—hospitals, schools, homes, clubs, welfare centres, etc.	45	3	5	21	74
Public halls, cinemas, theatres, etc.	7	—	2	—	9
Offices	26	—	16	44	86
Unoccupied premises	2	—	—	—	2
Dwelling houses	605	205	329	4,705	5,844
Total Premises	999	229	421	5,106	6,755

Table 3.

**Classification of Causes of Rat Infestation in Premises
Primarily Visited during 1947.**

Cause of Infestation	Interior Infestation		Exterior Infestation		Totals	Per-centage of Total Infestation
	Business Premises	Dwelling-houses	Business Premises	Dwelling-houses		
Directly due to or associated with defective or disused drains or sewers	33	140	2	73	248	20.2
Due to nature of business carried on in premises or vicinity ..	123	73	2	24	222	18.1
Tips, refuse dumps, market areas, etc.	33	24	3	29	89	7.2
Neglect in protection of food scraps and wrappings, poultry kept, etc.	48	113	4	40	205	16.7
Dilapidated premises or defects in structure	60	133	1	9	203	16.5
New premises, housing estates, building operations	5	12	1	2	20	1.6
Vicinity of open or culverted water-courses, railway cuttings or sidings	66	63	9	16	154	12.5
Bombed sites	26	47	2	12	87	7.2
Totals	394	605	24	205	1,228	100.0

Table 4.

Tracing of Rat Burrows in Relation to Drainage Infestation, 1947.

	By City Engineer	By Owners and Occupiers	By Technical and Sanitary Section	Totals
Examinations made	51	23	15	89
<i>Conditions found or action taken as result of these 89 examinations :—</i>				
Defective sewers reconstructed by Highways Department	6	—	—	6
Minor defects in sewers repaired	18	—	3	21
Disused privy midden—drains removed ..	4	—	—	4
Other disused drains removed or otherwise dealt with	7	4	—	11
Defective sewers and drains repaired by Corporation at owner's expense	5	—	16	21
Defective drains remedied by owners or dealt with by Sanitary Section	—	13	1	14
Outward rat burrows consolidated	15	1	—	16
Surface rat burrows consolidated	6	7	—	13
Undermining due to causes other than rats	4	1	—	5
Totals	65	26	20	111

Table 5.
Rodent Control Survey.
Analysis of Conditions found in each Ward.

Ward	Premises Surveyed	Premises Rat-Infested	Category of Rat-Infestation			Premises Mouse- Infested	Premises— No evidence of Infestation
			Reservoir	Major	Minor		
All Saints	4,527	41	—	3	38	1,043	33,443
Ardwick	5,987	83	—	3	80	678	5,226
Beswick	7,005	31	1	1	29	913	6,061
Blackley	7,715	52	—	4	48	287	7,376
Bradford	7,677	20	—	3	17	720	6,937
Cheetham	6,024	68	—	8	60	751	5,205
Chorlton-cum-Hardy	12,606	23	—	—	23	1,108	11,475
Collegiate Church	3,724	89	—	3	86	359	3,276
Collyhurst	3,982	12	—	—	12	421	3,549
Crumpsall	4,820	73	—	4	69	219	4,528
Didsbury	8,997	16	—	—	16	398	8,583
Exchange	1,012	89	—	—	89	41	882
Gorton North	7,110	29	—	1	28	363	6,718
Gorton South	8,182	26	—	1	25	597	7,559
Harpurhey	4,965	44	1	1	42	916	4,005
Levenshulme	6,416	56	—	1	55	438	5,922
Longsight	7,352	10	—	1	9	593	6,749
Medlock Street	5,452	17	—	—	17	795	4,640
Miles Platting	4,468	78	—	6	72	832	3,538
Moss Side East	4,684	32	—	—	32	565	4,087
Moss Side West	5,258	23	—	—	23	766	4,469
Moston	6,701	87	2	5	80	336	6,278
New Cross	4,293	120	1	10	109	545	3,628
Newton Heath	5,570	66	—	4	62	238	5,266
Openshaw	6,364	85	—	4	81	594	5,685
Oxford	2,502	119	—	3	116	69	2,314
Rusholme	6,236	5	—	—	5	315	5,916
St. Ann's	1,607	61	—	—	61	120	1,426
St. Clement's	1,289	208	—	13	195	99	982
St. George's	6,263	24	—	1	23	730	5,509
St. John's	1,599	57	—	2	55	43	1,499
St. Luke's	5,829	89	—	1	88	830	4,910
St. Michael's	3,957	78	1	5	72	861	3,018
St. Mark's	6,775	130	—	—	130	902	5,743
Withington	15,126	11	—	—	11	379	14,736
Wythenshawe	12,174	41	—	—	41	294	11,839
Totals	214,248	2,093	6	108	1,979	19,158	192,997

Table 6.

Type of Premises Visited on Survey and Analysis of Infestation.

Type	Surveyed	Rat-Infested	Category of Rat-Infestation			Micc-Infested	No evidence
			Reservoir	Major	Minor		
Air Raid Shelter	109	9	—	—	9	1	99
Allotments, etc.	298	122	—	4	118	—	176
Bakehouses	46	4	—	—	4	1	41
Camps	6	—	—	—	—	—	6
Cemeteries	10	—	—	—	—	—	10
Clinics	24	1	—	—	1	2	21
Churches, etc.	362	6	—	—	6	11	345
Clubs	108	2	—	—	2	4	102
Dairies	20	1	—	—	1	—	19
Day Nurseries	26	1	—	—	1	2	23
Ditches	—	—	—	—	—	—	—
Brookcourses	64	35	1	5	29	1	28
Derelict buildings	338	5	—	—	5	33	300
Dwelling-houses	186,051	698	—	12	686	17,592	167,761
Factories—food	151	33	—	6	26	12	106
Factories—non-food	2,025	324	1	28	295	90	1,611
Farms	87	22	—	—	22	—	65
Garages	1,206	27	—	—	27	14	1,165
Gardens—market	40	5	—	—	5	—	35
Government buildings	20	—	—	—	—	4	16
Hospitals	35	10	—	2	8	4	21
Hotels	63	—	—	—	—	5	58
Institutions	63	2	—	—	2	6	55
Land	907	38	—	4	34	1	868
Land—bombed sites	497	3	—	—	3	4	490
Markets	12	4	—	—	4	—	8
Offensive Trades	3	2	—	—	2	—	1
Offices	3,232	103	—	—	103	168	2,961
Parks, etc.	70	5	—	—	5	1	64
Piggeries	16	12	—	—	12	—	4
Public Entertainment	123	5	—	—	5	7	111
Poultry Runs	24	20	—	—	20	—	4
Public buildings	236	13	—	—	13	17	206
Public houses	688	21	—	2	19	40	627
Railway bankings	40	10	—	—	10	—	30
„ warehouses	10	2	—	—	2	—	8
„ sidings	52	18	—	1	17	—	34
„ stations	33	12	—	1	11	—	21
Refreshment	210	29	—	—	29	18	163
Restaurants	51	9	—	2	7	5	37
Refuse destructors	1	—	—	—	—	—	1
Refuse tips	23	12	2	5	5	—	11
Schools	308	15	—	1	14	47	246
Shops—food	5,218	100	—	1	99	452	4,666
„ —non-food	8,916	102	—	5	97	499	8,315
Slaughter-houses	4	2	—	—	2	—	2
Stables	150	19	—	4	15	5	126
Store-sheds	347	45	1	16	28	6	296
Sports Grounds	49	6	—	—	6	1	42
Warehouses	1,854	171	—	4	167	104	1,579
Wharves	3	—	—	—	—	—	3
Airport	1	1	—	—	1	—	—
Welfare Centres	10	1	—	—	1	1	8
Reservoirs	7	5	—	1	4	—	2
Zoos	1	1	—	1	—	—	—
Totals	214,248	2,093	6	105	1,982	19,158	192,997

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* Excluding Abortion.
† From 1931 Rates for Maternal Mortality are based on Live and Still Births.

